

PRACTICAL COMPLETION FOR WATER SUPPLY PROJECTS

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BORANG PENGESAHAN STATUS TESIS ♦

JUDUL: PRACTICAL COMPLETION FOR WATER SUPPLY PROJECTS

SESI PENGAJIAN: 2006 / 2007

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PRACTICAL COMPLETION FOR WATER SUPPLY PROJECTS

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A project report submitted in partial fulfilment of the
requirements for the award of the degree of
Master of Science in Construction Contract Management

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JULY 2007

I declare that this project report entitled “*Practical Completion for Water Supply Projects*” is the result of my own research except as cited in the references. The project report has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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To Ijah, Khairul and Rina.

Thank you for your support, love and encouragement.

ACKNOWLEDGEMENT

This project report was completed with the contribution of many people whom I would like to express my sincere gratitude. They have contributed towards my understanding and thought.

Firstly, I would like to convey my sincere thanks and gratitude to my supervisor, Associate Professor Dr Rosli bin Abdul Rashid for his patience, time, guidance, comments and friendship throughout the entire research.

I am also indebted to my employer, SAJ Holdings Sdn Bhd for allowing me to continue my studies and the assistance given for the relevant information towards making this research a success.

My fellow postgraduate students should also be recognised for their support. My sincere appreciation also extends to all my colleagues and others who have provided assistance at various occasions. Their views and tips are useful indeed.

Finally, I am deeply grateful to my family for their unconditional love, continuous support, encouragement and care through out my studies.

ABSTRACT

Practical completion is a term used in the construction industry and many standard forms of contract to denote completion of the works by the Contractor. The law and practices in relation to the completion of building and engineering projects are complex issues that often give rise to conflict. There are only a few law cases that give guidance to practitioners. It seems that the meaning of practical completion is still not settled although the phrase has been used and found in many standard forms over the decades. This present the construction industries with uncertainty as to its exact meaning, leaving it open to various interpretations. The aim of this study is to determine legal meaning of practical completion and to develop a guideline that can assists in certifying practical completion particularly for water supply projects. For determining the legal meaning, the study focused on courts' decisions in defining the terms of completion of works, provision in the standard forms, commentary from the learned authors and the practicalities of construction works itself. A guideline for certifying practical completion of water supply projects has been developed based on the issues found from the analysis of a few samples of completed water supply projects, practicalities and guided with the legal meaning as suggested. Based on the study, the writer suggested that the correct legal meaning of practical completion is **“Practical completion occurs when the Works has reached such a stage of completion that they are capable of being occupied or used by the Employer for the purpose for which they are apparently required and intended, notwithstanding the presence of minor outstanding works and trivial defects”**. From the proposed definition, it means that, for the Contract Administrator to exercise his opinion, what has to be considered is a particular criteria rather than an abstract and undefined concept; and the actual use of the works by the employer for the required purpose or intended will be prima facie evidence that the criteria has been met, regardless of the presence of minor outstanding works or trivial defects. It would thus be beneficial to the contracting parties if an unambiguous definition and guideline for certifying of practical completion is provided in the contract document. The Contractor may plan the works based on the intent of the contract so that principal areas will be ready for occupation or use by the due date for completion and some less critical outstanding works may be completed during the defects liability period.

ABSTRAK

Penyiapan Praktikal adalah satu terma yang digunakan dalam industri pembinaan dan kebanyakan borang kontrak standard yang merujuk kepada penyiapan kerja oleh kontraktor. Undang-undang dan amalan berhubung penyiapan bangunan dan projek-projek kejuruteraan adalah satu isu yang kompleks yang biasanya menimbulkan konflik. Terdapat hanya beberapa kes perundangan sahaja yang memberi petunjuk kepada pengamal-pengamal. Maksud penyiapan praktikal masih lagi belum dapat diputuskan walaupun frasa tersebut telah banyak digunakan dalam borang kontrak standard sejak dahulu lagi. Ini menyebabkan industri pembinaan menghadapi situasi yang tidak jelas tentang makna dan maksud sebenar terma tersebut yang mendorong kepada pelbagai interpretasi tersendiri. Kertas penyelidikan ini adalah bertujuan untuk menentukan maksud perundangan bagi penyiapan praktikal dan untuk menyediakan garis panduan yang dapat membantu dalam mengesahkan penyiapan praktikal khususnya untuk projek bekalan air. Untuk menentukan maksud sebenar dari segi undang-undang, kertas penyelidikan ini telah memberi tumpuan kepada keputusan –keputusan mahkamah dalam mendefinisikan terma penyiapan praktikal, peruntukan dalam borang kontrak standard, ulasan dan komen dari penulis yang bijaksana dan kemunasabahan kerja-kerja pembinaan itu sendiri. Satu garis panduan untuk mengesahkan penyiapan praktikal didalam projek bekalan air akan disediakan selaras dengan isu-isu yang dibangkitkan dari analisa-analisa yang diambil dari contoh-contoh projek yang telah siap, kemunasabahan kerja-kerja pembinaan bekalan air dan dibantu oleh maksud perundangan yang disarankan. Berdasarkan kepada penyelidikan ini, penulis berpandangan bahawa, maksud perundangan sebenar bagi penyiapan praktikal adalah **“Penyiapan praktikal berlaku apabila kerja-kerja telah sampai kepada tahap penyiapan yang mana ianya boleh diduduki atau digunakan oleh majikan bagi tujuan yang mana ianya secara jelas diperlukan dan dimaksudkan, tanpa mengambil kira kehadiran kerja-kerja kecil yang masih belum disiapkan dan kecacatan yang tidak mustahak”**. Dari definisi yang dicadangkan ianya bermaksud bahawa Pentadbir Kontrak hendaklah membuat pertimbangan dengan menggunakan kebijaksanaannya, terhadap kriteria-kriteria tertentu dan bukannya konsep yang abstrak dan yang tidak dijelaskan; dan kegunaan dan tujuan sebenar kerja-kerja tersebut dibina oleh pihak majikan telah berjaya dihasilkan akan menjadi bukti-bukti *prima facie* bahawa kriteria tersebut telah ditepati, tanpa mengambil kira kehadiran kerja-kerja kecil yang masih belum disiapkan dan kecacatan yang tidak mustahak. Oleh yang demikian, untuk memberi munafaat kepada pihak-pihak berkontrak disarankan satu definisi yang jelas dan garis panduan untuk mengesahkan penyiapan praktikal disediakan di dalam dokumen kontrak. Pihak kontraktor boleh merancang kerja-kerja berdasarkan kepada intipati sesuatu kontrak supaya bahagian kerja utama atau penting telah siap sedia dan boleh digunakan tepat pada waktunya dan mana-mana kerja remeh-temeh yang masih belum disiapkan mungkin boleh disiapkan di dalam tempoh tanggungan kecacatan.

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LIST OF ABBRIEVATIONS

| | | |
|------|---|--|
| CIDB | - | Construction Industry Development Board Malaysia |
| DB/T | - | Design & Build / Turnkey |
| IEM | - | Institution of Engineers Malaysia |
| JCT | - | Joint Contracts Tribunal United Kingdom |
| PAM | - | Pertubuhan Arkitek Malaysia |
| P.D. | - | Project Director |
| PWD | - | Public Works Department Malaysia |
| SAJ | - | Syarikat Air Johor Sdn Bhd |
| SAJH | - | SAJ Holdings Sdn Bhd. |
| S.O. | - | Superintending Officer |

CHAPTER 1

INTRODUCTION

1.1 Background of the study

The law and practices in relation to the completion of building and engineering projects are complex issues that often give rise to conflict. There are only a few law cases that give guidance to practitioners. Moreover, there are considerable numbers of different approaches to the certification of completion in standard forms of contract.

Generally, full and complete performance is required to discharge contractual obligations. Humphrey Llyod QC in *Babcock Energy Ltd v Lodge Stutevant Ltd*¹ held that completion of a contract normally means the discharge of all contractual obligations including the liability for payment of damages for breach of a primary obligation. This is a strict view of the concept of completion.

The completion of an obligation by the contractor will usually mark the transfer of certain risks or the crystallisation of certain rights. The term completion may therefore

¹ (1994) 41 CLR 45.

have a number of different meanings in a contract, depending upon the obligation. For example, completion for the purposes of payment may differ from that of defining the end of the construction stage, which in turn may differ from that of defining the end of the defects liability period.

However in construction contracts, the purpose of signifying completion of work is not to release the contractor, but to permit the employer to take possession of the work and to allow the contractor to leave the site².

Practical completion³ or substantial completion is a term used in the construction industry and many standard forms of contract to denote completion of the works by the Contractor. The time between the date of commencement and the date for practical completion is the time taken to complete the works. Any attempt to describe a contractor's obligation to complete his works within the time stipulated in the contract must assume that there is a basis to ascertain whether the particular works have reached a state of completion. The typical expression used in construction contracts for this purpose is practical completion and it distinguishes the state of the works from that at final completion. This distinction allows for minor outstanding or defective works, which do not detract from the enjoyment or utilisation of the facility to be completed or rectified notwithstanding that the employer had taken over and started to use the facility⁴.

The Contract Administrator usually certifies the Practical Completion when he is satisfied that the contractor has performed and completed all the works specified in the contract. The certificate is usually called "Certificate of Practical Completion"⁵.

² Uff, J. "Construction Law", 8th Edition (London: Sweet & Maxwell, 2002), p 283.

³ PWD 203A/203 CI 39(b), IEM CI 39(b), PAM CI 15.1, PWD Form DB/T CI 41.2, CIDB CI 20.2 (b)(i).

⁴ Chow, K.F. "Law & Practice of Construction Contracts", 3rd Edition, (Asia: Sweet & Maxwell, 2004), p 382.

⁵ PWD 203A/203 CI 39(b), IEM CI 39(b), PAM CI 15.1, PWD Form DB/T CI 41.2, CIDB CI 20.2(b)(i).

The issuance of “Certificate of Practical Completion” is an important project milestone and triggers the following⁶:

- The date stated in the Certificate of Practical Completion marks the end of the contractor’s liabilities in respect of his contractual obligations except his liability to make good defects that occur during the Defects Liability Period.
- One moiety of the retention fund has to be released to the contractor.
- The date of practical completion marks the commencement of the Defects Liability Period.
- Sets the date for the beginning of the period of final measurement and valuation.
- The contractor’s liability to insure ends and the employer then assumes the risks.
- The contractor’s liability to liquidated damages (if any) ends.
- The end of restriction on the opening of arbitration on most matters.
- The contractor is to send to the architect all documents necessary for the adjustment of the Contract Sum within six months after the date of practical completion.

The standard forms adopt different procedures for the identification of completion of works. Provision on practical completion can be found under the following clauses in the local standard form;

- PWD 203/203A (Rev.1/83), Clause 39 – Completion of Works.
- PWD DB/T 2002, Clause 41 – Completion of the Works.
- IEM 1989, Clause 39 – Completion of the Works
- PAM 1998 Clause 15 – Practical Completion and Defects Liability.
- CIDB 2000, Clause 20 – Time for Completion.

⁶ Rajoo, S. “The Malaysian Standard Form of Building Contract (The PAM 1998 Form), 2nd Edition, (Kuala Lumpur : Malayan Law Journal Sdn Bhd, 1999), p 141.

1.2 Statement of problem

Most of standard forms used throughout the construction industry except perhaps the PAM 1998 and CIDB 2000, do not define the term completion of the works. This present the construction industries with uncertainty as to its exact meaning, leaving it open to various interpretations. Professor Wallace in *Construction Contracts: Principles and Policies in Tort and Contract (1986)*, Sweet & Maxwell at p 519, considers this omission in the JCT 1963 Form as extraordinary⁷.

The term “practical completion” in construction contract has been around for a long time and it is still remarkable, in view of the frequent occasions upon which it is the subject of dispute, and which it is still has no firm legally defined the meaning. The meaning of words such as these, incorporated in a contract, is actually a question of law. The meaning of practical completion has caused difficulty in practice and in the courts partly because the word is not defined in the contract⁸.

Construction contracts involve the fixing and incorporation of the works on land, with the consequent transfer of ownership. The owner or employer is therefore likely to receive substantial benefit even if the works are not entirely complete. The doctrine of substantial performance mitigates the harshness of the rule that if work is completed but not in accordance with the contract no payment is due⁹ and allows the contractor payment for work if substantially completed with an allowance for defects. It is a question of fact whether the contractor has substantially performed his obligations. The contractor cannot rely on the doctrine to seek payment for work carried out if he has abandoned the works¹⁰. It applies where the work has been completed except for minor defects or minor outstanding works.

⁷ Ibid.

⁸ Ibid, p 142.

⁹ Bolton v Mahadeva (1972) 1 WLR 1009.

¹⁰ Sumpter v Hedges (1898) 1 QB 673.

The requirements of completion in relation to a time obligation are likely to be different than for the obligation for payment, particularly when the contract makes provision for the contractor to remedy defects and/or outstanding work in the defects liability period. So for instance, occupation by the Employer may be good evidence of completion for payment purposes but it will not necessarily be relevant evidence of completion of the time obligation¹¹.

When the work or part of it is “practically complete” the contractors would want to hand it over to the employer so that he can ask for the release of final payment, so as to diminish his outstanding obligations and so that the employer can assume responsibility for subsequent insurance. The Contract Administrator, on the other hand, does not want to take over anything at all until he is satisfied that the contractor has completed everything properly. At this juncture all the provisions in the condition of contract as stated above become subject to scrutiny and the most difficult arguments centre on the question, “Is it practically completed or not?”. As previously stated, the meaning of practical completion has caused difficulty in practice and in the courts partly because the word is not defined in the contract. As such, whether or not the works are ‘practically completed’ is a matter of the opinion of the Contract Administrator.

Based on the writer’s 15 years’ involvement in managing water supply projects and contracts, the issues on whether the work is complete or not has always become a subject matter. Different Contract Administrator has different views on the definition of practical completion. At what stage of completion of work can you issue Certificate of Practical Completion? To what extent does the outstanding work or types of defects hinder the practical completion? Do we have any standard assessment criteria or guidelines for certifying completion of the works?

As such, it only stands to reason that it would serve the parties better if all involved knew what is meant by practical completion. It would thus be beneficial if an unambiguous definition, critical areas and elements of works that should be necessarily

¹¹ Impresa Castelli SpA v Cola Holdings Limited (2002) 87 CLR 123

complete for the purpose of practical completion are provided in the contract document. And, if the extent of the works that should be complete for the purpose of practical completion is less rigorous, this could perhaps lead to lower prices.

1.3 Objective of the study

The objectives of the study are as follows:

1. To determine legal meaning or definition of practical completion of works based on cases of law.
2. To develop a guideline that can assist in certifying practical completion for water supply projects.

1.4 Scopes and Limitation of the Study

This study will focus on courts' decision in defining the terms of completion of works based on cases of law reported. There is no limit in the cases chosen in terms of period.

Standard form of contract to be analysed is limited to PWD203/203A, PWD DB/T, IEM, PAM and CIDB only. Some comparisons to other standard forms will be made if required.

For the analysis of completed water supply projects, the study will be made on sample of projects carried out by SAJ Holdings Sdn Bhd as one of the leading water supply providers in the country.

1.5 Significance of the Study

The conclusion or finding of this study will determine the preferred legal meaning of practical completion of works and to develop a guideline that can assist in certifying practical completion of the works for water supply projects.

This unambiguous definition of practical completion and guidelines provided in the contract document will assist the contracting parties to understand their rights and obligations related to completion of works. The Contractor may then plan the works based on the intent of the contract so that principal areas will be ready for occupation by the due date for completion and some less critical outstanding works may be completed during the defects liability period. There may be situations where the Employer cannot use completed areas because 'practical completion' is different from 'substantial performance'. In the latter case a party who is not even in full compliance with the entire terms of the contract may be entitled to recover the contract amount less the value of incomplete works, assuming that the latter are minor in nature and do not substantially affect the usage of the product.

Besides that, if the extent of the works that should be completed for the purpose of practical completion is less rigorous, this could perhaps lead to lower prices. Lastly, when the parties are clear about their rights and obligations, it can help to avoid disputes.

1.6 Research Methodology

A systematic of research process or approach has been adopted to achieve the objective of study. Generally, this research process covers four stages, which involves identifying the research issue or problem, develop research structure and research design, data analysis, and writing up of research.

1.6.1 First Stage: Identifying the Research Issue

The most important step in research is identification of the research issue or problem. Normally, the issue is established by reading the various related materials in journals, articles, books and discussion with the related parties within the industry. Based on the research issue, the objective and scope of the study has been identified.

1.6.2 Second Stage: Develop research structure and research design

After setting out the area of study, research structure and research design have been developed. Types of data and information need to be collected and method or techniques of research used have been identified at this stage. The court cases are collected from the electronic database: Lexis-Nexis Legal Databases. The data collected consists of cases from Malaysia Law Journal and other commonwealth jurisdiction namely United Kingdom, Australia, and Hong Kong etc.

A few samples of water supply projects completed by SAJH will be identified and the data and information related to completion of works will be gathered.

Other information is gathered such as through readings of books, standard form of contracts, annual report, journals, articles, manual and discussion with practitioners.

1.6.3 Third Stage: Analysis and synthesis of data and information

The courts' decision and provision in the standard form will be analysed and synthesized in order to determine the preferred legal meaning of practical completion of works.

Issues found and practicalities of completion of water supply projects will be analysed. Guided with a suggested legal meaning, then a guideline will be developed for certifying practical completion of works for water supply projects. A discussion with the practitioners will be conducted to seek their views on the proposed guideline.

1.6.4 Fourth Stage: Writing up of research.

The whole research process will be thoroughly assessed to identify whether the research objectives have been achieved. After that, writing up of research will be made

1.7 Chapter Organisation

Chapter 1 set the background of the study, identified the research issues, determined the objective, scope and limitation of the study, research methodology and the organisation of chapter.

Chapter 2 discussed in brief about the history and principal activities of SAJ Holdings Sdn Bhd and their capital works.

Chapter 3 explained about provisions of practical completion in the standard form of contract. This included the discussions about the provision, different stages of completion, effects of practical completion and some views or comments from the learned authors.

Chapter 4 analysed the cases relating to practical completion. The analysis is focused on the issues of meaning or definition of practical completion and when it occurs. The issues of outstanding and defect works is also examined to see whether these will prevent the works from being certified as practically completed. The legal meaning of practical completion then will be suggested.

Chapter 5 analysed a few completed water supply projects by SAJH. The emphasis in this analysis is to study how the practical completion was being certified and whether it was consistent with the suggested legal meaning of practical completion and precedent set by the court. Then, a guideline will be proposed to assist in certifying practical completion for water supply projects.

Chapter 6 concluded the finding for the whole research.

CHAPTER 2

SAJ HOLDINGS SDN BHD AND CAPITAL WORKS

2.1 Introduction

SAJ Holdings Sdn Bhd (SAJH) was incorporated on 5th February 1999 as Sempurna Pelita Sdn Bhd under the Companies Act, 1965. SAJH is currently one of the leading water companies in the Malaysia. This chapter will discuss the background of SAJH and its capital works. It will give us some ideas on how important this development works and the cost involved in producing and distributing the treated water to customers.

2.2 Industry Background.

In Malaysia, water supply is the responsibility of each state government. State Governments are responsible for the development, operation and maintenance of water supplies. In the case of Johor, the State Government exercises its responsibility through SAJH, which is a totally privatised company.

It is important to note that this privatization exercise is the first of its kind in Malaysia as SAJH bears full responsibility including the development of sourceworks and the associated treatment and distribution works. Although efforts have been made in other states to corporatise or privatize water supply works, the role of these bodies excludes responsibilities for development of source works and distribution, which is generally capital intensive¹².

2.3 History and Principal Activities

SAJH has been granted a thirty (30) year Concession by the State Government of Johor to supply treated water to consumers in Johor commencing 1st March 2000. Through the Concession, SAJH is an integrated water supply services company, principally involved in the sourcing of raw water, treatment and distribution of treated water to consumers in the State of Johor.

¹² “Ranhill Utilities Berhad”, Prospectus dated 16 th May, 2002. page 211.

SAJH was established to undertake the Concession pursuant to the Concession Agreement. Syarikat Air Johor Sdn Bhd (SAJ) is a wholly owned State Government of Johor entity formed in 1993 to carry out the water supply services in Johor. Pursuant to a vesting order made in 1994 by the Menteri Besar Johor under the Water Supply (successor Company) Enactment 1993, all assets, rights, liabilities and staff of the Johor State Government regarding water supply services were transferred to and vested in SAJ.

The water supply services in Johor was subsequently privatized to SAJH as part of the State Government's effort to further improve the operation and service level of water supply in Johor. A Concession Agreement between the State Government of Johor, Lambang Optima Sdn Bhd, SAJ and SAJH was signed on 20th April 1999. SAJH was formed as the special purpose company to hold the Concession to exclusively supply water to consumers in Johor.

See figure 2.1 for transformation of water supply in Johor and figure 2.2 for privatisation framework.

TRANSFORMATION OF JOHOR WATER SUPPLY

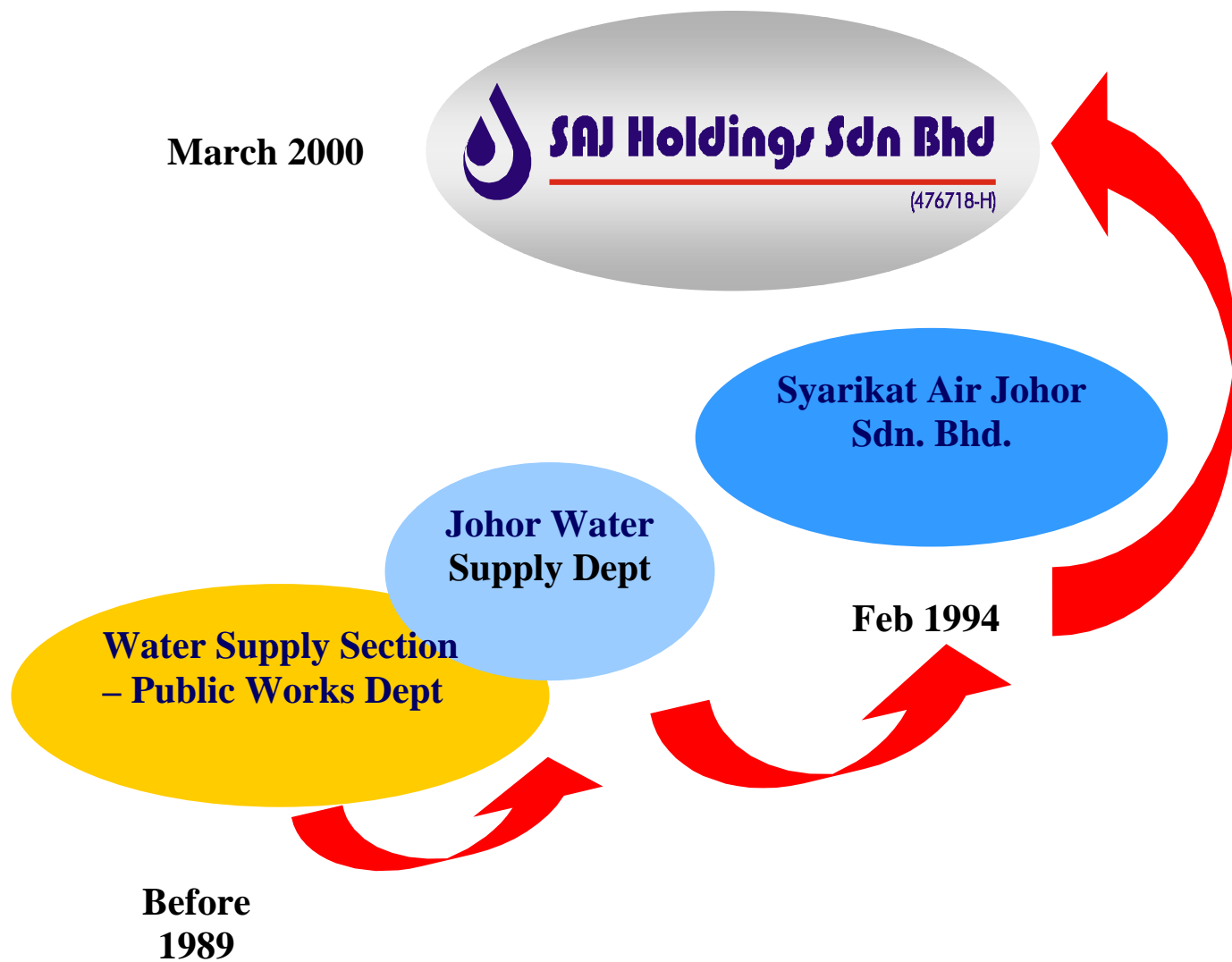


Figure 2.1: Transformation of water supply authority in Johor

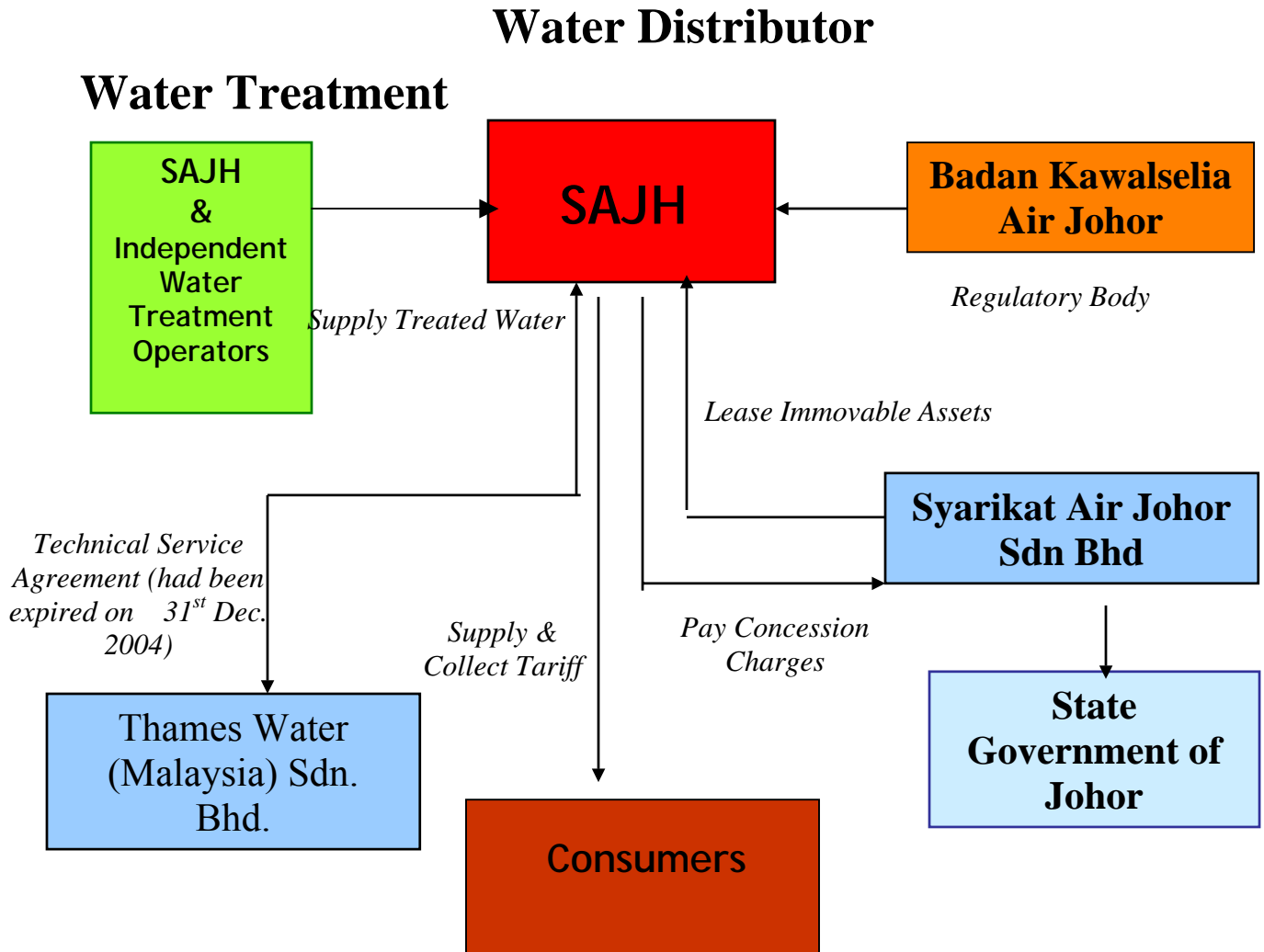


Figure 2.2: Privatisation Framework (Source: “Ranhill Utilities Berhad”, Prospectus dated 16th May 2002, page 45)

2.4 Rights and Obligations in Concession Agreement

Under the Concession, the State Government granted to SAJH the licence to exercise its rights and obligations under the Concession Agreement as well as the right to use, occupy, operate and maintain the Existing Infrastructure. The Existing Infrastructure consists of 27 Water Treatment Plants and the piping systems, land and buildings in the State of Johor.

One of the obligations under the Concession is SAJH shall design, construct, operate and maintain assets, required for the Concession in accordance with the Programme of Works (i.e. Capital expenditure program) over the 30 year period. The Programme of Works will increase production capacity by 1337 megalitres per day (Mld) over the Concession period according to a schedule of capital works and asset replacement¹³. Extensive asset replacement programme will reduce the Non-Revenue Water level from the current level to 20% over first 10- year period.

2.5 Proposed Development Works

The Project Area comprises the entire state of Johor, covering all the eight (8) districts. In order to formulate a realistic water supply development programme, SAJH had made an assessment of the water demand for each of the eight districts, with projections up to the end of the concession period i.e. the year 2029. This assessment is an essential requirement for the planning and implementation of the proposed new development works to ensure that there will not be any short fall of water supply.

¹³ Ibid, page 235.

Based on the growth of water demand projected for the concession period and current capacities of existing supply facilities, SAJH has prepared appropriate water supply development programme to meet the demands. The development plans include source works, treatment facilities and distribution system for the eight districts in the State.

Information on the water resources and water supply development schemes identified are derived from past comprehensive studies, principally from “study on comprehensive water Resources Planning and development in the State of Johor in 1996” by SMHB Sdn Bhd and studies carried out by other regional water supply.

In order to eliminate the dependency of water supply from Public Utilities Board, the State Government has requested SAJH to undertake the project called “Zero Dependency Project”, in addition to the Programme of Works. SAJH has completed the project last year.

In addition to meeting new water demands, such as Iskandar Development Region, the planning is already on the way to cater for such requirement.

To fulfill the obligations to provide an adequate water supply to consumers whose demand for water continuously increases over time and also to upgrade and extend the water treatment and supply networks, SAJH shall, at the start of each Concession Year, provide the State Government with a proposed Programme of Works (i.e. capital expenditure programme) for the then current Operating Period. The Programme of Works shall be reviewed and approved by the State Government before implementation.

2.6 Capital Cost or Expenditures

Under the Concession Agreement, the projected capital expenditure for Programme of Works is RM 13.6 billion over the 30 year concession period. Based on 1999 prices, the aggregate capital expenditure amounts to RM 6.5 billion. The estimated cost for Zero Dependency Project is RM 649 million¹⁴

2.7 Implementation and Progress of Works

Most of the works implemented are through direct or selective tender. A condition of contract used is either PWD 203/203A or PWD DB/T 2000, depending on the types of procurement system either conventional or design and build or turnkey.

Currently, more than RM 1 billion worth of works have been completed. The works completed consists of construction of new or rehabilitation/upgrading of water treatment plants, booster stations, reservoirs or suction tanks, new pipelines and relocation or replacement of old pipelines.

¹⁴ Ibid, page 29.

2.8 Conclusion

The implementation of the proposed Capital Works by SAJH should be carried out very carefully due to the construction of major water supply and resource infrastructure facilities and a huge amount of money to be spent. Most importantly SAJH needs to comply with one of their obligations under the Concession Agreement i.e. capital expenditure program.

It would be reasonable to assume that such contracts will include typical provisions to ensure that problems or risks associated with construction are addressed accordingly. For instance, SAJH will need to ensure that projects are completed on schedule and as intended purpose.

CHAPTER 3

PRACTICAL COMPLETION IN THE STANDARD FORM

3.1 Introduction

This chapter will discuss the literal meaning and the principles of practical completion based on the provision in the standard form. Various issues associated with practical completion such as stages of completion and effects of practical completion will be highlighted. The views or comments from book or learned authors will also be included.

3.2 Provisions of Practical Completion in the Standard Form

The standard forms adopt different procedures for the identification of completion of works. Provision on practical completion of works can be found under the following clauses in the local standard form;

- PWD 203/203A (Rev. 1/83), Clause 39(b).
- PWD DB/T 2002, Clause 41.2.
- IEM 1989, Clause 39(b).
- PAM 1998, Clause 15.1.
- CIDB 2002, Clause 20.2.

3.2.1 PWD 203/203A (Rev. 10/83)

Clause 39(b) states that *“When the whole of the Works have reached practical completion according to the provisions of this Contract and to the satisfaction of the S.O., the date of such completion shall be certified by him and such date shall be the date of the commencement of the Defects of Liability Period as provided in Clause 45 hereof. The certificate issued under this sub-clause shall be referred to as the “Certificate of Practical Completion”.*

3.2.2 PWD DB/T (Design & Build / Turnkey) 2002

Clause 41.2 states that *“When the whole of the Works have reached practical completion according to the provisions of this Contract and to the satisfaction of the P.D., the date of such completion shall be certified by him and such date shall be the date of the commencement of the Defects of Liability Period as provided in Clause 48 hereof. The certificate issued under this sub-clause shall be referred to as the “Certificate of Practical Completion”.*

3.2.3 IEM 1989

Clause 39(b) states that *“When the whole of the Works have reached practical completion according to the provisions of this Contract and to the satisfaction of the Engineer, the date of such completion shall be certified by him and such date shall be the date of the commencement of the Defects of Liability Period as provided in Clause 45 hereof. The certificate issued under this sub-clause shall be referred to as the “Certificate of Practical Completion”.*

3.2.4 PAM 1998

Clause 15.1 states that *“ When the Architect is of the opinion that the works are practically completed, meaning that the Contractor has performed and completed all the*

necessary Works specified in the Contract and the patent defects existing in such Works are 'de minimis', the Architect shall forthwith issue a Certificate of Practical Completion. The Works shall be deemed to be practically completed for all purposes of this Contract on the day named in such Certificate”.

3.2.5 CIDB 2000

Clause 20.2(a) states: *“When the Contractor considers that the Works have achieved completion sufficient to enable the successful completion of the Test on Completion he may notify the Superintending Officer in writing to that effect”.*

Clause 20.2(b) states: *“Within 14 days of receipt of such notice, the Superintending Officer shall carry out an inspection of the Works and the carrying out the Test on Completion prescribed by the Contract. Pursuant to such inspection and test the Superintending Officer shall do either one of the following:*

(i) Issue to the Contractor a Certificate of Practical Completion if in his opinion the whole of the Works have achieved Practical Completion and have satisfactorily passed any Test on Completion prescribed by the Contract, subject to the Contractor giving a written undertaking to complete any outstanding work during the Defects Liability Period. The Superintending Officer shall state in the said Certificate of Practical Completion the date on which the Works have achieved Practical Completion and handed over to the Employer.

(ii) Give instructions to the Contractor specifying all works, which in his opinion are required to be completed by the Contractor before the issue of a Certificate of Practical Completion.

Clause 20.2(c) states that *“If the Superintending Officer has given instructions pursuant to sub-clause 20.2(b)(ii), the Contractor shall not be entitled to the Certificate of Practical Completion until the works specified in the said instructions have been completed to the satisfaction of the Superintending Officer”*.

3.2.6 Discussion

Under Clause 39(b), PWD 203/203A which is typical to Clause 41.2, PWD DB/T and Clause 39(b), IEM Conditions, it is provided that if the Contractor has reached practical completion of the whole Works, then the S.O. (or the P.D. or the Engineer) must issue the Certificate of Practical Completion which would also signify the commencement of the Defects Liability Period. Although not expressly stated, it must follow that when the Contractor has achieved practical completion as certified by the S.O., for all intents or purposes of the Contract, the Contractor has complied with the completion obligation as set out in Clauses 4, 38(b), 39(a) and 40, PWD 203/203A¹⁵.

“Practical completion” has not been specifically defined other than the Works has reached completion according to the provisions of the Contract and to the satisfaction of the S.O. It is apparent that whether or not the Works are practically completed is a matter for the opinion of the S.O., but that opinion is subject to review on arbitration¹⁶.

It is submitted that the S.O. should certify practical completion if the Works has reached a state of completion, notwithstanding trifling defects, when the S.O. or the qualified person responsible for the Works is able to apply, and has applied to the

¹⁵ Lim, C. F. “The Malaysian PWD Form of Construction Contract”, Sweet & Maxwell Asia 2004, p 83.

¹⁶ Ibid, p 83.

Authorities, for the certificate of fitness for occupation required under the Street, Drainage and Building Act 1974¹⁷.

Whether the Works has reached practical completion is determined by the S.O.. The Works may be said to have reached practical completion when the same has reached a stage of completion that it will satisfactorily perform the functions for which it is constructed or may be occupied and used, notwithstanding the presence of minor outstanding works and defects the execution or making good of which will not cause undue inconvenience to the occupants or users¹⁸. In determining whether the Works has reached practical completion, the S.O, must be completely satisfied to questions as follows:

- (a) Has the Works been completed to such a stage that it will perform the functions for which it is constructed or may be occupied and used?
- (b) Is outstanding or defective work substantial?
- (c) Will the execution of outstanding work or making good of defects cause undue inconvenience to the occupants or users?

Where the Works has been completed to a stage as meets the criteria above, the Certificate of Practical Completion, may be issued. If otherwise, the outstanding and defective work must be identified, and a list of the same prepared and forwarded for the action of the Contractor. This process must be repeated until the above criteria are met before the Certificate of Practical Completion may be issued. The Defects Liability period commences from the date of practical completion stated in the Certificate of Practical Completion. Notwithstanding the issue of the Certificate of Practical Completion, all outstanding work must still be executed and defective work made good by the Contractor. A list of these must be issued to the Contractor together with the

¹⁷ Ibid, p 84.

¹⁸ JKR Malaysia, "A Guide on The Administration of Public Works Contracts", Ibu Pejabat JKR Malaysia, 1988, p213.

Certificate of Practical Completion. A reasonable time must also be specified for the Contractor to execute and / or make good the same¹⁹.

Clause 15.1, PAM 1998 defines the meaning of practical completion as “when the Architect is of the opinion the Works are practically completed, meaning that the Contractor has performed and completed all the necessary Works specified in the Contract and the patent defects existing in such Works are ‘*de minimis*’, the Architect shall forthwith issue a Certificate of Practical Completion”.

According to Sundra Rajoo²⁰, practical completion under Clause 15.1, PAM 1998 may therefore mean that all the construction work that has to be done is completed. The architect’s discretion is limited only to very minor items of work left incomplete under the ‘*de minimis*’ principle. Works can be practically completed notwithstanding that there are latent defects. The defects not apparent at the date of practical completion are to be remedied in the Defects Liability Period. The architect may not issue a Certificate of Practical Completion if there are patent defects.

He added that “This approach is consistent with the philosophy underlying the PAM 1998 Form where the contractor must fulfil his obligations to carry out and complete the Works as shown in the Contract Documents. If he has not fulfilled his obligation on or before the completion date (unless specifically altered by Architect’s instructions), then the matter is left within the opinion of the architect and is not dependent upon any formal application by the contractor. The decision of the architect is based on an inspection of the works and the exercise of his reason. It is submitted that the architect should exercise his discretion with caution in respect of the very minor items of work left incomplete. He should also satisfy himself that the retention money will cover both the cost of completing such items and the likely cost of attending to remedial works”.

¹⁹ Ibid.

²⁰ “The Malaysian Standard Form of Building Contract (The PAM 1998 Form), 2nd Edition, Kuala Lumpur : Malayan Law Journal Sdn Bhd, 1999, p 144.

Clause 1.1, CIDB 2000 defines the meaning of word or phrase “Practical Completion” as “completion of the Works including test on Completion under the Contract and where the Works include Equipment which requires a license for its operation, then completion so as to render such Equipment eligible for issuance of a license in respect of its operation. Provided however the existence of minor outstanding works and defects, which do not affect the functional use of the Works shall not affect Practical Completion”. It also defines “Equipment” as “the machinery, apparatus and the like intended to form or forming part of the Works”.

Clause 20.2, CIDB 2000 stipulates the procedure for certification of practical completion. First the Contractor must notify the S.O. when he considers that the Works have achieved practical completion. Upon such notification, the S.O. shall then arrange necessary “Test on Completion” within 14 days of such notice. If in his opinion the whole of the Works have achieved practical Completion and have satisfactorily passed any Test on Completion prescribed by the Contract, but subject to the Contractor giving a written undertaking to complete any outstanding work during the Defects Liability Period, he should issue to the Contractor a Certificate of Practical Completion. However, if the S.O. is of the opinion that certain works are required to be done including any defect, and then the S.O. shall give to the Contractor instructions regarding the outstanding work or defect. The Contractor shall not be entitled to the Certificate of Practical Completion until such outstanding work or rectification of defect as been completed by the Contractor²¹.

Because of long usage, the phrase of “practical completion” is virtually identical in almost all the standard forms: in the various JCT Conditions of 1980 and 1998, in the RIBA Conditions of 1963: “When in the opinion of the Architect Practical Completion of the Works is achieved (or in RIBA 1963, ‘the Works are practically completed’)... he shall forthwith issue a certificate to that effect and Practical Completion of the Works shall be deemed for all the purposes of this Contract to have taken place on the date named in such certificate”; in the Minor Works Conditions of 1980 and 1998: “The

²¹ Ong, S.L. “A Guide on the CIDB Standard Form of Contract For Building Works 2000 Edition”, CIDB Malaysia, 2000.

Architect shall certify the date when in his opinion the Works have reached Practical Completion”.

Similar phraseology is commonly used in local standard forms, in the PAM 1998: “When the Architect is of opinion that the Works are practically completed, meaning that the Contractor has performed and completed the necessary Works...the Architect shall forthwith issue a Certificate of Practical Completion. The Works shall be deemed to be practically completed ...on the day named in such Certificate”; in the various PWD Conditions and IEM Conditions: “ When the whole of the Works have reached practical completion...and to the satisfaction of the S.O, the date of such completion shall be certified by him...The certificate issued under this sub-clause shall be referred to as Certificate of Practical Completion; in the CIDB Conditions: “...if in his opinion the whole of the Works have achieved Practical Completion...The S.O. shall state in the said Certificate of Practical Completion the date on which the Works have achieved Practical Completion...”.

We can summarize the criteria and/procedure to be considered in determining when practical completion occurs based on literal meaning in the provision in the standard form as follows:

| No | Type of Standard Form | Criteria and/ Procedure |
|----|--------------------------|---|
| 1 | PWD 203/203A (Rev 10/83) | <ul style="list-style-type: none"> ▪ Completion according to the provisions of the Contract. ▪ To the satisfaction of the S.O. |
| 2 | PWD DB/T 2002 | <ul style="list-style-type: none"> ▪ Completion according to the provisions of the Contract. ▪ To the satisfaction of the S.O. |
| 3 | IEM 1989 | <ul style="list-style-type: none"> ▪ Completion according to the provisions of the Contract ▪ To the satisfaction of the S.O |
| 4 | PAM 1998 | <ul style="list-style-type: none"> ▪ Completion according to the provisions of the Contract ▪ Patent defects are 'de minimis'. ▪ To the opinion of the Architect. |
| 5 | CIDB 2000 | <ul style="list-style-type: none"> ▪ 14 days notice to the S.O from Contractor. ▪ S.O. shall carry out an inspection of the Works and carrying out the Test on Completion. ▪ Contractor giving a written undertaking to complete outstanding works during defects liability period. ▪ To the opinion and satisfaction of the S.O. |

3.3 Different stages of “completion”

The courts, on the very few occasions they have addressed the matter, have confused somewhat with the concept of practical completion; to the legal mind “completion” seemingly means “completion” and can hardly be qualified.

The expression “practical completion” however means something different from “complete completion”. As Viscount Dilhorne explained, in the case of *Westminster City Council v Jarvis & Sons Ltd*²² (will be discussed in detail in Chapter 4):

“One would normally say that a task was practically completed when it was almost but not entirely finished; but ‘practical completion’ suggests that is not the intended meaning ...”

The problem is compounded by the fact that the words “complete” and “completion” are used indiscriminately throughout the standard forms, but it is suggested that in a typical building and engineering contract “completion” may be used in at least four stages:

- i) First stage is “practical completion”, whatever that may be.
- ii) Second stage is “complete/final completion”, which occurs when all the actual physical work has been finished; this may or may not coincide with “practical completion”.
- iii) Third stage is “defects completion”, which is achieved when all defects appearing during the Defects Liability Period have been made good.
- iv) Fourth stage is “legal completion or complete obligation”, which occurs when the contractor has provided all information necessary for the preparation of the final certificate and the employer has made his final payment, so that in legal terms the

²² (1970) 1 WLR 637.

contract has been “performed” and both sides discharge their contractual obligations.

3.4 The effects of practical completion

When the Contract Administrator certifies that the works have been completed, a number of consequences will follow. Precisely what these are will depend upon the terms of the contract concerned, but the following are typical²³:

- The employer is entitled and obliged to take possession of the contract works.
- The contractor’s responsibility (if any) for insuring the contract works comes to an end.
- Any liability of the contractor to pay damages for late completion ceases. Moreover, this liability will not be revived if the work is later found contain defects, for such a discovery does not retrospectively invalidate certificate²⁴.
- The contractor usually becomes entitled to the release of one-half of the accumulated retention money.
- The Defects Liability Period begins.

The effects of practical completion are almost the same under all the standard form. The significance of each of these effects, in connection with the practical completion, will now be considered.

²³ Murdoch, J and Hughes, W “Construction Contracts”, 3rd Edition (Spon Press, New York, 2000), p184.

²⁴ Westminster City Council v Jarvis & Sons Ltd (1970) 1 WLR 637.

3.4.1 Whether the employer is entitled and obliged to take possession of the contract works.

Actually, nowhere in any of the standard forms is it stated that on practical completion, “possession” of the site shall revert to the employer, nor that thereafter the contractor has no further right of access except to make good defects. In effect, on practical completion the contractor can simply walk away and leave the site vacant. If defects appear, the employer must of necessity give the contractor “such possession, occupation or use as is necessary to enable him to perform the contract” by carrying out the necessary remedial work: though in *Kaye* (where the employer was loath to stop using warehouse to allow the contractor to re-lay the floor for a second time) shows the sort of problem which can rise in practice.

In cases where provision is made for the employer’s taking “possession” of a part to trigger practical completion of that part, his taking “partial possession” of the whole will trigger practical completion of the whole (the decision in *Skanska* has now establish that), but many may wonder why the standard forms do not simply state that, if the employer “takes possession” of the works, practical completion shall be deemed to have occurred.

The reason might appear to arise from the fact that, if the works are fully finished to the Contract Administrator’s satisfaction, practical completion must have occurred, and must be certified, even if the employer for some reasons (for example, downturn in business or may be an inability to sell) does not wish actually to take physical possession of them at that time. Conversely, the employer may wish for some good reason to take possession before the works are completed hundred percent. By taking possession in these circumstances, either in part or in whole, without the contractor’s consent, he runs the risk of incurring liability to the contractor either for extension of time and additional payment under the specific conditions or for damages under the general law.

It would seem therefore that the provision of “partial possession or occupation” in the standard form, is a device whereby the employer can obtain the benefit of using a part or parts of the works for their intended purpose without the risk of the time for completion of the remainder being extended; and for the contractor’s giving up the right to that possible extension of time is a proportionate reduction of the liquidated damages.

It is submitted that, even in the limited circumstances of those clauses in some of the standard forms which provide for “partial possession or occupation” by the employer, “possession” is only relevant to practical completion if it is taken to mean the employer’s making use of the works or part of them for the purpose for which they are required or intended.

3.4.2 The contractor’s responsibility for insuring the contract works comes to an end.

As regards to insurance of the works, the contractor should no longer be responsible for this once the works are ready for the employer’s use (not applicable of partial occupation under PWD and IEM standard form, which full value of works still insured until whole works reached practical completion).

3.4.3 An end to liability (or entitlement to) liquidated damages

The very essence of liquidated damages is that they are a genuine pre-estimate of the loss likely the employer is likely to suffer if he is unable to have the use of the completed works, for the purpose for which it is required. It follows therefore that once the works have been “completed” to such a state the purpose for liquidated damages no longer exists, and this must be so even if for some reason the employer does not wish to begin usage or has perhaps decided to use the works for some different purpose. As, under all the standard forms, the trigger for an end to the contractor’s liability for liquidated damages is “practical completion”, it seems clear that the question of what constitutes practical completion is intimately linked to the works being at such a stage that they are capable of being used for their required purpose.

3.4.4 Release of one-half of the accumulated retention money

Issuance of certificate of practical completion will mark the release of one-half of retention money in most of standard form. The money will be used to ease the financial burden to the contractor.

3.4.5 Defects Liability Period begins

The defects liability period is in effect a proving period during which, through use, any latent defects in the works may be discovered. Therefore, it is only right that when the works have reached a stage at which they can be used for their required purpose this proving period should begin (even if for some reason the employer does not wish actually so to use them).

Since all these effects which follow from certification of practical completion are the logical consequence of the works' being capable of being used for the purposes for which they are required, in the absence of any other clear definition it would seem that the works' having been brought to that state is the only true defining characteristic of practical completion that the standard forms provide.

3.5 The views or comments from authors

I.N.Duncan Wallce Q.C., writing in 1969 in his *Building and Civil Engineering Standard Forms*, said:

“Practical completion is nowhere defined in the contract. **Presumably** it means such completion as will reasonably justify the architect in releasing the contractor from the site and in requiring the employer to enter into full beneficial completion”.

I.N.Duncan Wallace Q.C. also in his *Hudson's Building and Engineering Contracts (11th Edition)*, 1995 at paragraph 4.029 says variously:

“...it seems clear that completion for the purpose of this instalment means a sufficient degree of completion to permit occupation and use of the works by the owner and departure of the contractor from the site, but not a complete and perfect discharge of every last contractual liability of the contractor with regard to quality or finish of the work”.

He added in paragraph 9.005:

“Usually it will mean *bona fide* completion free of known or patent defects so as to enable the owner to enter into occupation. The word practical or substantial completion in English standard forms **probably** do not more than indicate that trivial defects not affecting beneficial occupancy will not prevent completion (the more so of course, if the contract provides for a maintenance or defects liability period)”.

In paragraph 4.005 he says:

“In general what is contemplated...is a state of apparent completion free of known defects which will enable the owner to enter into occupation and make use of the project...which is not in fact be bettered..., namely ‘apart from merely trivial defects, a stage of construction at which is ready for occupation in all ways relevant to the contract and free from known omissions or defects’”.

Professor John Uff in his book *Construction Law (8th Edition)*, 2002 at page 283 says

“...However in construction contracts the purpose of signifying completion is not to release the contractor, but to permit the employer to take possession of the works and to allow the contractor to leave the site...While such terms do not permit the contractor to achieve completion without finishing the whole of the work (save for permitted exceptions), it is **thought** they allow completion to be certified despite the existence of non-materials departures from the contract”.

Sir Athony May of the *Keating on Building Contracts (5th Edition)*, 1991 at page 528 and 529 says:

“Practical Completion is perhaps easier to recognise than to define. No clear answer emerges from the authorities as to the meaning of the term...**It is submitted** that the following is the correct analysis:

- (1) The Works can be practically complete notwithstanding that there are latent defects;
- (2) A Certificate of Practical Completion may not be issued if there are patent defects. The Defects Liability Period is provided in order to enable defects not apparent at the date of Practical Completion to be remedied;
- (3) Practical Completion means the completion of all the construction work that has to be done;
- (4) However, the Architect is given discretion...to certify Practical Completion where there are very minor items of work left incomplete, on “*de minimis*” principle.

He added the following:

“This discretion of the Architect is to be exercised with caution. He should obtain a written acknowledgement from the Contractor of the items of work left incomplete and an undertaking to complete them. The Architect should satisfy himself that the retention money will cover both the cost of completing such items and the likely cost of attending to remedial works. He should also be satisfied that there is no likelihood of the Employer suffering loss due to interference with the use of the Works while the items are completed”.

From the above comments from these learned authors we can see that the very use of such expressions as “presumably”, “probably”, “thought” and “it is submitted” only serves to demonstrate something seems to have of uncertainty with which practical completion is encircled.

3.6 Conclusion

Based on the provision of practical completion in the various standard form and the guidance and commentary from the learned authors, it seems that the meaning of practical completion is still not settled although that phrase has been used and found in many standard forms over the decades.

It might be thought that such provisions in the Contract will give complete discretion to the Contract Administrator to decide what “practical completion” is, as well as whether it has been achieved, but it is well established in law that, in deciding any matter which is stated to be his opinion or decision, the Contract Administrator must consider and take account of not only the facts and the individual circumstances but also the specific terms of the contract and the common law as expressed in decisions of the courts.

CHAPTER 4

LEGAL MEANING OF PRACTICAL COMPLETION

4.1 Introduction

As discussed in previous chapter, the meaning of practical completion has difficulty in practice partly because the word is not defined in the contract, although in PAM 1998 and CIDB 2000 efforts have been done to incorporate this definition.

Whether the works are “practically completed” is a matter for the opinion of the Contract Administrator. But that opinion is subject to review on arbitration or court wherein the arbitrator or judge is bound to adopt the preferred legal definition of the term. It would serve the parties better if all involved knew what is meant by practical completion. There should be less ambiguity if the legal definition is into the contract and the Contract Administrator, when certifying practical completion, is guided by it.

This chapter will try to examine and make an analysis of a few decisions by court in relation to issues associated with practical completion. This include issues on defects

and outstanding works. Based on the discussion and an analysis, a definition of “practical completion” will be established.

4.2 The cases

There are limited cases reported which give clear guidance to practitioners on the meaning of practical completion of building and engineering projects.

4.2.1 *Jarvis and Sons v Westminster City Council*²⁵

This case arose out of a contract on RIBA 1963 condition headed ‘Local Authorities Edition (with Quantities)’ whereas the employer engaged the main contractor to erect a multi-storey car park. The date for completion of the whole contract was 15th January 1968. The employer’s architect nominated the sub-contractor to perform piling work. The nominated sub-contract between the main contractor and the nominated sub-contractor provided, inter alia, for the nominated sub-contractor to indemnify the contractor for loss or damage caused to the contractor by failure on the part of the nominated sub-contractor to complete works within the specified time. The nominated sub-contractor agreed to complete piling work by 20th June 1966 and purported so to do. Its men and equipment were withdrawn shortly thereafter. The main contractor then proceeded with construction. On 13th July 1966, the architect wrote to the main contractor in which he made reference to ‘completion’ of the piling work and referred the possible

²⁵ (1968) 118 New L.J 590 (at first instance); (1969) 1 WLR 1448, CA; (1970) 1 WLR 637, HL

release of retention money against a guarantee by the nominated sub-contractor. Nothing appeared to be wrong until 21st July 1966, when the main contractor's excavator accidentally nudged on of the exposed piles, which broke off. Drilling tests showed that many of the piles were defective. The defects were the result either of bad workmanship or the use of bad materials by the nominated sub-contractor. With the approval of the architects the nominated sub-contractor returned to the site and did extensive remedial work, and eventually the main contract works overran by twenty -one and half weeks. The main contractor sought extension of time on account of "delay on the part of nominated sub-contractor", under clause 23(g) (similar to clause 25.4.7 in JCT 80 and JCT 98).

At first instance, Donald J was decided there was entitlement to extension of time, holding that "delay on the part of the nominated sub-contractor" could only occur while he was still in the process of performing or purporting to perform the sub-contract, and that the nominated sub-contractor had achieved apparent completion of his works and handed them over to the main contractor.

The House of Lords unanimously upheld Donald J's judgment. The sub-contractor could not be said to be in delay, because it had achieved apparent completion (i.e. it had achieved such completion as would enable the contractor to take over himself or it had completed works to the reasonable satisfaction of the architects and the contractor).

Lord Hodson said:

"The discovery of the latent defects in the piles showed that the sub-contractor was in breach, not that it was in delay. It did not return in order to fulfil its contract but to remedy the breach...Taking into account the letters from the architect to the contractor of 13th July 1966 and 16th August 1966, I think that the learned judge was justified in his conclusion that, notwithstanding the latent

defects in the work which were subsequently discovered, there was apparent completion on 20th June 1966, when the site was handed over to the contractor”.

Viscount Dilhorne said:

“Completion under the contract is not postponed until defects which became apparent only after the work had been finished, have been remedied...If the architect and contractor had not thought that the sub-contract were completed on 20th June 1966, they surely would have objected to the sub-contractor’s departure from the site. They did not do so. And the contractor would surely not have carried out construction work which had to stop when the defects were discovered, if it had not thought the sub-contract works, the piling on which the building was to rest, had been satisfactorily completed”.

Lord Wilberforce said:

“That I do not consider alters the view of the matter which all concerned held on 20th June 1966, that the work was completed, although it might turn out to be defective...The learned judge made no explicit finding but his judgment proceeded on the basis that the sub-contractor had achieved apparent completion, and handed over to the contractor on 20th June 1966. I think that this was correct in fact and in law”.

This case actually not directly concerned with the definition of practical completion. The only proposition for which it is clear authority is that, in a contract under RIBA 63 (or now JCT 80 or 98) conditions, the main contractor has not right to extension of time if a nominated sub-contractor has finished his work on site, the main contractor has proceeded with the main contract works, although the sub-contract works are subsequently found to be defective, and rectification of those defects resulted in the main contracts being delay. It may also be said, on the authority in the case, the issue of a

certificate of practical completion does not imply that the contractor's work is all satisfactory and either acceptable or accepted.

These statements of law (which, delivered by the highest court, must be accepted) emerge from the reasoning behind the court's decision (the *ratio decidendi*). Usually a statement of law applied to the problems of a particular case. In essence, it is the principle upon which a case is decided. However, some of the judges in the case also referred particularly to "practical completion"; these references, though amount only to incidental observation (*obiter dictum*) and therefore, while persuasive are not necessarily unquestionable statements of the law. In this case Viscount Dilhorne takes a strict view that all patent defects are to be corrected before practical completion.

Viscount Dilhorne explained:

"The main contract not only states the date for completion of the contracts works. It also provides by Clause 15(1) that when in the opinion of the architect the works are practically completed he shall issue a certificate to that effect and 'practical completion' of the works shall be deemed for all purposes of this contract to have taken place on the day named in the 'certificate'. The contract does not define what is meant by 'practically completed'. One would normally say that a task was practically completed when it was almost but not entirely finished; but 'practical completion' suggests that is not the intended meaning and that what is meant is the completion of all the construction work has to be done...the defects liability period is provided in order to enable defects not apparent at the date of practical completion to be remedied. If they had been then apparent, no such certificate would have been issued. It follows that a practical completion certificate can be issued when, owing to latent defects, the works do not fulfil the contract requirements and that under the contract works can be completed despite the presence of such defects".

It appears that Viscount Dilhorne takes the view that so long as there are patent defects the architect may not issue a practical completion certificate.

In the Court of Appeal, Salmon L.J. had said (likewise *obiter*, of practical completion):

“The obligation upon the contractors under Clause 21 to complete the works by the date fixed for completion must, in my view be an obligation to complete the works in the sense in which the word ‘practically completed’ and ‘practical completion’ are used in Clauses 15 and 16 of the contract. I take these words to mean completion for all practical purposes, that is to say for the purposes of allowing the employers to take possession of the works and use them as intended. If completion in Clause 21(completion on or before the date for completion) meant completion down to the last detail, however trivial and unimportant, then clause 22 (liquidated damages) would be a penalty clause and as such unenforceable)”

From the above case, it can be concluded that practical completion means completion for all practical purposes when the contractor has performed all the contractual works except for very *de minimis* work and there are no patent defects in the works. All patent defects are to be corrected before issuance of practical completion certificate.

4.2.2 *P & M Kaye v Hosier & Dickinson Ltd*²⁶

This case arose out of a contract under RIBA 63 conditions to build a warehouse and offices by an agreement made in June 1966 between the employer and contractor. The arbitration clause, Clause 35 provided that any dispute arising as to the construction of the contract or as to any matter or thing arising thereunder or in connection therewith

²⁶ (1972) 1 WLR 146.

was to be referred to any arbitrator. The employer had, with the contractor's consent, had taken the possession of warehouse in April 1967 before the remainder of the contract works had been finished; under Clause 16 (similar to Clause 18 in JCT 80 and 98), therefore, practical completion of the warehouse was deemed to have occurred at that time and the defects liability period in respect of the warehouse was deemed to have commenced.

After having been taken into use, the warehouse floor was defective and, the contractor re-laid the floor and completed the work in August 1967. The re-laid floor again failed and further remedial work was required. The alleged defects in the floor was never remedied because according to the contractor this was because the employer was so busy using the warehouse that it was never convenient to do the work. In September 1968, the contractor wrote to the architect stating in effect that there was nothing substantially wrong with the work done and claiming balance of payment. The architect then issued a final certificate for the whole of the works.

The issue with which the House of Lords was concerned was the effect of Clause 30(7), which provided that the final certificate shall be "conclusive evidence in any proceedings arising out of this contract (whether by arbitration under Clause 35 of these Conditions or otherwise) that the Works have been properly carried out and completed in accordance with the them of this Contract", so that in so far as the Lordships' remarks concern to practical completion are only *obiter dicta*.

Lord Diplock says of "the construction period" which:

"...starts when he is given possession of the site under Clause 21(1). It continues until he has completed the works to the satisfaction of the architect so far as the absence of any patent defects in materials or workmanships are concerned. It ends with the issue by the architect of a certificate of practical completion under Clause 15(1). This is the date of completion for the purpose of determining whether or not the contractor is in breach of his obligation to complete the works by the date

so designated in the contract. The contractor then surrenders possession of the works to the employer, and the defects liability period starts...The contract contemplates that after the time of practical completion the employer shall have the use of the works for the purpose for which they were built...By issuing his certificate of practical completion he (architect) signifies his satisfaction with the state of the works at the end of the construction period; but this is subject to any latent defects which may become apparent to him during defects liability period”.

Lord Pearson said:

“The Contractors started relaying of the floor...That was a making good of defects in the defects liability period and in pursuance of a requirement from the architect”.

He further added:

“...that the Works have been properly carried out and completed in accordance with the terms of this contract...‘meaning no 1’ is that the whole series of building operations from beginning to end must be deemed to have been duly carried out and completed so that any claim in respect of alleged past defects and their consequences is excluded...‘meaning no 2’ is that everything that had to be done by way of building operations has now been done and properly done, all defects having been made good, so that the present state of the building is satisfactory but there is no exclusion of claims in respect of alleged past defects and their consequences...it was assumed that meaning no 1 was correct ”.

In this case, it takes a more expedient view of the construction industry, that it would be unrealistic to take practical completion to mean completion down to the last detail. Therefore, practical completion means as long as the work reaches a state of readiness for use or occupation by the employer notwithstanding of trifling defects.

4.2.3 HW Nevil (Sunblest) Ltd v William Press & Son Ltd²⁷

This case arose out of a contract on JCT 63 conditions (with July 1973 revision) that the defendant should carry out works consisting of site clearance, piling, foundation and drainage works prior to the erection of a new bakery. The works were carried out between September 1973 and April 1974, when building contractor (Trenthams) commenced work. A Certificate of Practical Completion dated 1st May 1974, a Certificate of Making Good Defects dated 21st May 1975 and a Final Certificate was issued in due course. In November 1974 the plaintiff's architect discovered that the drains laid by the defendant were defective and that there were defects in the hard standing. The defendant returned to the site and the defects were remedied.

However, Trenthams had been delayed by four weeks and the plaintiff had to pay them for that delay and for additional work consequent on the defects in the defendant's work. The plaintiff also incurred additional architect's fees and losses because the bakery was late in opening. The plaintiff commenced proceedings claiming that the defendant was in breach of contract and negligent and they were therefore liable for the plaintiff's additional costs and other consequential losses.

The issue before His Honour Judge Newey QC as Official Referee was whether the "conclusive evidence" effects under Clause 30(7), so his thoughts on practical completion are only *obiter dicta*.

Judge Newey, QC said that, in his judgment, since Clause 21(1) and the Appendix required the defendant to complete the Works by the date for completion, but that:

"I think that the work 'practically' in Clause 15(1), gave the architect a discretion to certify that William Press had fulfilled its obligation under Clause 21(1), where very minor *de minimis* work had not been carried out, but that if there were

²⁷ (1981) 20 BLR 78

any patent defects in what William Press had done the architect could not have given a certificate of practical completion’.

It appears that the judge takes the same view as Viscount Dilhorne in *Jarvis* case that so long as there are patent defects the architect may not issue a practical completion certificate.

4.2.4 Emson Eastern Ltd (in Receivership) v EME Developments Ltd²⁸

This case arose out of a contract under JCT 80 conditions, private without quantities, for the erection of business units. The architect certified that the plaintiff achieved practical completion of their Works, but the plaintiff subsequently went into administrative receivership, whereupon the employment was automatically determined under Clause 27.2. The defendant then had to employ other contractors to attend to snagging and other remedial works.

In this case, the judge was only to decide on two preliminary issues:

- (1) Does “Works’ within Clause 27.4.1 (the right of the employer to employ other ‘to complete the works’) and Clause 27.4.4 (the right of the employer not to make any further payments to the contractor ‘until after completion of the works’) include snagging and remedial works undertaken or requiring to be undertaken, after the date of practical completion?
- (2) Does practical completion constitute completion of the works for the purpose of Clause 27.4.4 of the contract?

²⁸ (1991) 55 BLR 114.

Judge Newey QC decided, first, that “works’ within clause 27.4.1 and 27.4.4 did not include snagging or other remedial work undertaken after practical completion and, secondly, that practical completion constituted completion for the purposes of Clause 27.4.4 since Clause 17.1 deemed practical completion to take place “for all the purposes of the contract” from the date named in the certificate.

In his judgment, Judge Newey QC also made a number of observations which explaining of the practicalities of building construction:

“I think that probably the most background fact which I should keep in mind is that building construction is not like the manufacture of goods in a factory. The size of the project, site conditions, use of many materials and employment of various types of operatives make it virtually impossible to achieve the same degree of perfection as can a manufacturer. It must be rare new building in which every screw and every brush of paint is absolutely correct...The effect of practical completion is to start the defects liability period running for the period stated in the appendix or, if none stated, for six months from practical completion. During that period the contractor would not be carrying out works, but it could be required to remedy and defects in them. The employer can then go into occupation of the building without having to make arrangements under Clause 18”.

He further added:

“I have described what I think to be the overall scheme of the contract. In my opinion there is no room for ‘completion’ as distinct from ‘practical completion’. Because a building can seldom if ever be built precisely as required by drawings and specification, the contract realistically refers to ‘practical completion’, and not ‘completion’ but they mean the same. If, contrary to my view, completion is something which occurs only after all defects, shrinkages and other faults have been remedied in accordance with Clauses 17.2 and 17.3 and a certificate to that

effect has been given under Clause 17.4 it would make the liquidated damages provision in Clause 24 unworkable and in practice would require the defects liability period to be added to the time initially negotiated by the parties for the carrying out of the works. The construction industry recognizes a difference between the carrying out of new works and “snagging”, that is to say dealing with minor defects in them”.

He went on to say (obiter):

“The standard which the architect must apply in deciding when practical completion of the works has been achieved was differently stated by Salmon LJ and by Lord Dilhorne in *Jarvis’s case*: the latter being more stringent than the former. In *William Press*, I seem to have sought a position in between and I think that is probably right”.

In these two judgments of *Nevill* and *Emson*, Judge Newey QC use of wording such as ‘I think’ and ‘probably’ tend to make his observations on the requirements for practical completion indecisive as well as *obiter*.

4.2.5 George Fischer Holding Ltd v Davis Langdon & Everest & Others²⁹

In this case, Davis Langdon & Everest (DLE) was the plaintiff’s quantity surveyors and also employed under a written contract as ‘Employer’s Representative’. DLE had been engaged as employer’s representative on a modified JCT 81 Design and Build contract for the construction and fitting out of a substantial warehouse development.

²⁹ (1998) 61 CLR 85.

It was accepted that the roofs were defective and the plaintiff as the employer had commenced proceedings against the design consultants, the roof and steel works contractor and DLE as the employer's representative.

Amongst the myriad allegations being made against each party, it was alleged that DLE had failed adequately to inspect and supervise the works in progress. Also alleged against DLE were in breach of contract for issuing a Certificate of Practical Completion, which resulted the plaintiff failed its right to call on a performance bond provided on behalf of the contractor.

At the date of completion there remained a substantial list of outstanding works and defects, and accordingly DLE had issued a Certificate of Practical Completion accompanied by a two page document headed 'Reserved Matters'. One of these reserved matters referred to snagging sheets. Despite having issued this document using the words 'certify' and 'practical completion' and having described it as issued 'under the terms of the contract', counsel for DLE argued that this document was a qualified completion certificate and could not constitute certification of practical completion under the terms of the contract.

The Court was not prepared to accept this argument. If works were uncompleted then it would be prudent for the certifier to refer to these matters within the Certificate of Practical Completion. The certificate of practical completion was by implication accepting these reserved matters as being consistent with achievement of practical completion. Accordingly the certificate, whether qualified in respect of defects or otherwise, had the effect of depriving the plaintiff of the benefit of the performance bond, and by failing to advise their employer of the relevance and importance of the certificate in that context, DLE was held to be breach of duty and negligent towards their client.

Judge John Hicks QC in his judgment says:

“...The usual provision is that any defects which appear during a specified defects liability period starting at the date of practical completion are to be specified by the responsible officer and made good by the contractor. The implication is that defects already apparent, unless very minor, are inconsistent with the achievement of practical completion...DLE were clearly in breach of those duties and negligent. Some of the grounds for that conclusion appear from the facts which I have already considered...If, as I have held, the document of 6th June 1990 was a Clause 20 certificate DLE were manifestly in breach of their duties as supervising officer in issuing it in view of the undisputed fact that practical completion had not been achieved...”

In this case, it appeared that when the Contract Administrator issued Certificate of Practical Completion with a long list of substantial outstanding and defects works it means the Works still not reach to a stage of practical completion.

4.2.6 Impresa Castelli SpA v Cola Holdings Ltd³⁰

This case arose out of a contract to build a hotel under JCT Form with Contractor’s Design 1981 conditions. There were substantial delays. There were a number of supplemental agreements for extended completion period. The original contractual date for completion was February 1999 and then extended to May 1999 save that the bedrooms would be made available to defendant in March 1999. The May completion date was also not met. This led to a further meeting and the parties on 1st September 1999 entered into a written agreement whereby they agreed that by 12th September 1999 the contractor “to ...complete the development and allow access to all

³⁰ (2002) 87 CLR 123

areas of the same so as to enable the hotel to fully operate there from, nothing contained herein shall in any way be deemed to prejudice the contractor's continuing obligation to use its best endeavours to complete the development as soon as reasonably possible and no access to the building by the employer as provided hereunder shall be deemed to amount to Practical Completion for the purposes of the original agreement".

The agreement also provided a list of works, including the snagging of the entire development, the commissioning of the air conditioning system throughout the hotel and completion of both the gymnasium and the sub-basement, which were not yet complete.

Against the history, the parties ended up in court, with the plaintiff forced to defend the defendant's claim for £1.17 million liquidated damages. Plaintiff argued that the grant of access, by the September agreement, amounted to the defendant taking "partial possession" as provided for in Clause 17, and that in consequence, only a very much reduced rate of liquidated damages per day would be recoverable from that date.

His Honour Judge Thornton QC carefully reviewed the conditions of contract. He held that the "access" referred to in the September agreement, is the use and occupation of the relevant parts of the hotel by defendant as provided in Clause 23.3.2 rather than in its taking partial possession of the hotel.

The learned judge reached this conclusion by saying:

"As a starting point, it is helpful to consider the nature of the three different states of 'possession of the site', 'partial possession of the works' and 'use and occupy the site or the works' that are provided in the conditions. It is clear that the nature of the possession and partial possession that are provided for is on of exclusive possession by the contractor or, once partial possession is taken by the employer. The contractor, following its giving up possession or partial possession, has no further right to enter the part of the works taken possession of save for the express purpose of making good work as part of its obligation to make good defects in the

work. On the other hand, the ‘use and occupation of the works by the employer’ that is referred to can encompass a wide range of situations since, as provided for Clause 23.3.1, this can be for the purposes of the storage of the employer’s goods or for any other purpose defined by the employer when requesting this facility from the contractor. This wide range of circumstances are provided for by the words ‘or otherwise’ in Clause 23.3.2. In all of these situations, the contractor retain exclusive possession of the parts of the works affected by such use and occupation but, by way of what is in effect a sub-license, the contractor allows the employer to use or occupy the land to the extent necessary for the particular purposes that the employer has in mind”.

He further added:

“Had Cola intended to take back exclusive possession of more of the hotel pursuant to Clause 17.1, despite the fact that the air-conditioning system and other work had not been completed, it would have been simple for the September agreement to have stated that partial possession was being taken. However, such exclusive possession would not have been possible if the air-conditioning system was to remain incomplete and subject to completion without being treated as having achieved practical completion. In such circumstances, it would be more natural to construe the word ‘access’ in the September agreement as meaning “use and occupation’ rather than ‘partial possession’ since Cola’s objectives could be achieved if Impresa remained in possession of the entire hotel but granted Cola the means of operating the hotel around Impresa in the meantime but could not be achieved if it took partial possession of the bulk of the works”.

The case is actually more directly concerned with the question of whether the practical completion had or had not occurred. This reasoning by the learned judge, invoking Clause 23.3.2 and construing the phrase ‘or otherwise’ to mean ‘for any purpose whatsoever’, leads to the somewhat surprising proposition that an employer may make

use of the works for the very purpose for which they are intended but still recover liquidated damages as if he had been prevented from doing so.

4.2.7 Skanska Construction (Regions) Ltd v Anglo-Amsterdam Co Ltd³¹

This case is similar to *Impressa* which concerns the question of whether the practical completion had or had not occurred. This case also arose out of a contract under JCT with Contractor's Design 1981 conditions for a construction of office facility. The date for completion had passed on 11th December 21995. ICL was allowed (on Anglo-Amsterdam's agent instruction) to enter the building and would begin commence fitting out works on 12th February 1996. ICL was charged with security once it entered into this 'non-exclusive' possession and Skanska was allowed access to carry out work, subject to making the necessary security and access arrangements with ICL. Anglo-Amsterdam continued to deduct liquidated damages at the rate of £ 20,000 per week. At that time the air-conditioning system was not fully operational and Skanska had not yet produced operating and maintenance manuals. Skanska conceded that they had not met the additional stringent of the modified Clause 16, but argued that as Anglo-Amsterdam (through the tenant) had taken possession of all parts of the works and according to Clause 17 meant that practical completion must be deemed to have occurred.

The dispute arose out of Anglo-Amsterdam's deduction of liquidated damages from sums otherwise due to Skanska for the alleged delay from 12th February 1996 until at least 25th February 1996 when Skanska achieved Practical Completion. The total amount deducted was £ 181,619. The essential dispute was as to whether Practical Completion had occurred on 12th February 1996, as contended for by Skanska, or on a date after 25th April 1996, as contended for by Anglo-Amsterdam.

³¹ (2002) All ER (D) 172 (Sep).

As amended, the relevant parts of Clause 16 read as follows:

“When the Works have reached Practical Completion in the opinion of the Employer’s Agent, he shall confirm in writing to the Employer such date of Practical Completion and the Employer within 14 days of receipt of such written notice shall give the Contractor a written statement to that effect which statement shall not reasonably delayed or withheld and Practical Completion of the Works shall be deemed for all practical purposes of this contract to have taken place on the day named in such statement. The statement referred to in Clause 16.1 will not be issued by the Employer until he is satisfied that any unfinished works are very minimal and of a minor nature and not fundamental to the beneficial occupation of the building for its designed use as a purpose built facility”.

Judge Thornton decided that Clause 17 was to be construed on the same principles of construction as relates to covenants and leases, namely that “a clause dealing with ‘any part’ of a parcel of land is applicable to ‘the whole’ of that parcel as well as to any lesser part of it” and held, as a question of law, that “Clause 17 can operate when possession has been taken of all parts of the Works as opposed to only parts of the Works...Practical Completion under Clause 17.1 of the whole of the Works occurred on 12th February 1996 on account of partial possession of the whole of the Works being taken by Anglo-Amsterdam and, through it, ICL on that date”.

The learned judge managed to overcome the problem of the ‘exclusiveness’ of ‘possession’ (which he had himself raised in *Impressa*) by finding, in this case:

“... that Skanska gave up possession of the whole of the Works on 12th February 1996 and that, whilst out of possession, was granted a sub-licence by ICL for relevant parts of the works for the purpose of finishing off work left incomplete or in a defective state on 12th February 1996. This sub-licence had been granted to Skanska by ICL once

ICL had been granted possession of the Works by Skanska following Skanska's giving up possession to Anglo-Amsterdam on Anglo-Amsterdam's instructions".

4.2.8 Synthesis of meaning of practical completion

From the above cases, we can synthesis the judges or court views or decisions on meaning of practical completion as follow:

| No | Cases | Views or decisions by judge or court |
|----|-----------------------------|---|
| 1 | <i>Jarvis v Westminster</i> | <ul style="list-style-type: none"> ▪Donald J (for instance): apparent completion means it had achieved such completion as would enable the contractor to take over himself or it had completed works to the reasonable satisfaction of the architect and the contractor. ▪Salmon L.J (Court of Appeal): mean completion for all practical purposes, for the purposes of allowing the employer to take possession of the works and use them as intended. ▪Lord Hodson (House of Lords): apparent completion occurs notwithstanding the latent defects in the work which are subsequently discovered. <ul style="list-style-type: none"> ▪Viscount Dilhorne (House of Lords): meant is the |

completion of all the construction work that has to be done and there are no patent defects.

- Lord Wilberforce (House of Lords): the work was completed although it might turn out to be defective (latent).

- Practical completion means completion for all practical purposes when the contractor has performed all the contractual works except for very minor *de minimis* work and there are no patent defects in the works

2 *Kaye v Hosier*

- Lord Diplock: after the time of practical the employer shall have use the works for the purpose for which they were built and date of completion is for the purpose of determining whether or not the contractor is in breach of his obligation to complete the works by that date.

- Practical completion means as long as the reaches a state of readiness for use or occupation by the employer notwithstanding trifling defects.

3 *Nevil v William Press*

- Judge Newey QC: to certify practical completion when very minor *de minimis* work has not been carried out but no patent defects of the work.

4 *Emson v EME*

- Judge Newey QC: to certify practical completion when very minor *de minimis* work has not been carried out. Practical completion to take place “for all the purposes of the contract”. The contract realistically refers to “practical completion” and not “completion “ but they mean the same.

4.3 Defects and outstanding works

There are two types of defects, namely:

- (i) Patent defects, and
- (ii) Latent defects.

4.3.1 Patent defects and outstanding works

The proposition, made both by the textbooks and in cases since *Jarvis*, that practical completion cannot be certified if there are patent defects or items of work still unfinished (unless they are merely trivial or *de minimis*) stems from the opinion expressed *obiter* by Lord Dilhorne that practical completion means “completion of all the construction work that has to be done”. The precise implication of this statement always become subject matter, but it has to be said that there is nothing in the standard forms, or anywhere else, to justify the assertion, which, it is suggested, arises simply from the reluctance of the legal mind to believe that anything can be described as in any way “complete’ if it is not 100 per cent finished and correct.

There does not seem to be any substantive reason why deficiencies should prevent the issue of a certificate of practical completion if the works are in fact capable of being used for their required purpose. The contractor’s overriding obligation to carry out the whole of the works and to remedy defects still exists. The value of any known defective work, and any work still outstanding, will not (or at least should not) have been certified for payment.

In practice Contract Administrator often, when the works are nearing completion, carry out joint inspections with contractor and issue a “defects list” with those items considered essential for enabling practical completion to be issued. Alternatively, a contractor (requirement in certain standard form) is to write to the Contract Administrator saying that in his view the works were, or will be, fit for the employer’s purposes on a specific date, if necessary with an undertaking to attend to any known defects or outstanding items during early weeks of the defect period, and asking for a certificate of practical completion as at that date. The Contract Administrator must act impartially in determining whether to certify or not practical completion.

4.3.2 Latent or suspected defects

It was clearly established by the judgment in *Jarvis* that practical completion can occur, and should therefore be certified, despite the presence defects. However, what happens in a situation where the project is apparently ready for the employer’s use but there is a suspicion with the soundness of the works? The judgment of the House of Lords in *Jarvis* was clearly influenced to some extent by the fact that the main contractor had proceeded with construction even though the soundness of the piling was suspect. This is however not an indication that the piling was acceptable, but only that it was “completed”. Furthermore, most of the standard form provide of dealing with such situation, which the Contract Administrator may instruct the opening or testing of any part of the works. In the event that the suspected fault is proved, the Contract Administrator will be justified in reluctance to certify practical completion until it has been corrected; but if it is fault free, he should certify practical completion as having occurred on the original date.

4.4 Conclusion

In general, practical completion might occur when the works are ready for occupation in all ways relevant to the contract and are free from known omission or defects (subject to the Latin maxim *de minimis non curat lex*, i.e. that the law is not concerned with trivial matters).

Based on the practicalities of construction works, the provisions of all the standard forms, the decisions of the court, the comments from the learned authors, the writer's experiences and common sense, the writer therefore suggested that the correct legal meaning or definition of practical completion is as follows:

“Practical completion occurs when the Works has reached such a stage of completion that they are capable of being occupied or used by the Employer for the purpose for which they are apparently required or intended, notwithstanding the presence of minor outstanding works and trivial defects”.

CHAPTER 5

COMPLETION OF WORKS FOR WATER SUPPLY PROJECTS

5.1 Introduction

The implementation of water supply projects should be completed within a construction schedule especially to meet increasing demand and to ensure the continuity of safe and clean supply. Any delay on the completion of works will cause problems not only to water operator like SAJ but also to consumers as well.

In this chapter, a few samples of water supply projects completed by SAJ have been identified. Stage of completion, list of outstanding and defects works during issuance of certificate of practical completion then be examined and analysed. The samples of projects chosen will cover the following categories of works;

- i) Pipe laying
- ii) Construction of reservoir, water or suction tank.
- iii) Construction of water treatment plant and/ booster pump house.

The guideline for certifying of practical completion for each category of works will then be developed guided by the legal definition as established.

5.2 Finding and discussion

A total number of 10 completed projects have been examined and analysed on the stage of their completion including outstanding and defects works apparent during the date of practical completion.

The following criteria or questions are used as a guide in the analysis:

- i) Whether the works had been completed to such a stage that it would perform the function or purpose for which it is constructed or may be occupied or used.
- ii) Is outstanding work or defective substantial?
- iii) Will the execution of outstanding work or making good of defects cause undue inconvenience to the occupants or users?

5.2.1 Whether the works had been completed to such a stage that it will perform the function or purpose.

All the works had been completed to such a stage that it would perform the function or purpose it intended:

- i) For pipe laying it means that it has already passed pressure and leakage test, including sterilising and flushing (unless not permitted) and the pipeline is ready to be commissioned and placed into service.
- ii) For reservoir/tank it means that it has already passed water tightness test, including sterilising and flushing (unless not permitted) and the reservoir/tank is ready to be commissioned and placed into service.
- iii) For water treatment plant it means that it has already passed all the required tests and can produce the water with quality and quantity as specified. And for booster pump it means that it has passed all the required tests and the pump can perform as specified. The plant or booster pump should also already comply with all the regulation required.

5.2.2 Is outstanding work or defective substantial?

It was found that in the construction of Semangar water treatment plant, the incomplete works for staff quarters seems quite substantial. It is also the same for the construction of reservoir at Ulu Tiram, which the incomplete works for external works were quite substantial in terms of amount. Although non completion of these works does not affect the function or purpose for which the facility is constructed, the incomplete of staff quarters for example will result in the Employer losing the opportunity to use or occupy them.

Other projects, the outstanding or defective works were found to be minimal. However, from my observation, it is quite common for the contract administrator to hold the issuance of the certificate of practical completion until all the outstanding and defects works are completed or make good.

5.2.3 Will the execution of outstanding work or making good of defects cause undue inconvenience to the occupants or users?

For all the projects which have been analysed, the execution of outstanding work or making good of defects does not cause inconvenience to the users except for the staff quarters which the employer lost the opportunity to occupy them.

5.2.4 Suggestions

Although all the facilities constructed can be used as intended but in case of incomplete of staff quarters, it is suggested not to issue practical completion for that part of works until it is completed and can be occupied. For all the outstanding and defects works found during practical completion, a specific time should be given to the contractor to complete or make good and failing which, the employer can carry out the works and all the expenses incurred in connection with its should be charged to him.

Based on the legal definition established, it is suggested that the contract administrator cannot hold the issuance of the certificate of practical completion if the outstanding and defects works are minor and trivial. The contract administrator is obliged to certify practical completion once it occurs.

5.3 Guideline to be used for certifying practical completion for water supply projects

Based on the above finding and guided with the legal meaning as suggested, the writer would like to propose a guideline that can assist in certifying for the practical completion mainly for water supply projects. This guideline hopefully can be used to help the Contract Administrator who act as certifier to make a better decision as to whether to certify the works practically completed or not. At the same time, it will give guidance to the certifier to deal with the outstanding and defects works.

The proposed guideline is as follows:

5.3.1 Introduction

This guideline will provide the Contract Administrator or certifier the procedure in certifying the practical completion for water supply projects. The procedure provided is based on the legal definition of the practical completion as established, practices and the requirement of the contract generally.

5.3.2 Definition

The Works may be said to have reached practical completion when the works has reached such a stage of completion that it will capable and satisfactorily perform the functions or purpose it is constructed, notwithstanding the presence of minor outstanding work and trivial defects, the execution or making good of which will not cause undue inconvenience and is harmless to the occupants, users and general public.

5.3.3 Whether the works has reached the stage of practical completion.

The Contract Administrator or certifier must be completely satisfied with answers to the following criteria or questions:

- i) Whether the works has been completed to such a stage that it would perform the function or purpose for which it is constructed or may be occupied or used.
- ii) Is outstanding work or defective substantial?
- iii) Will the execution of outstanding work or making good of defects cause undue inconvenience or not safe to the occupants, users and general public?

The Works has reached a stage fulfilling the function or purpose for which it is constructed when it satisfies the following stages:

- i) For pipe laying it means that it has already passed pressure and leakage test, including sterilising and flushing (unless not permitted) and the pipeline is ready to be commissioned and placed into service. Under pipe rehabilitation project, the old pipe already “condemned” and new pipe solely in used.

- ii) For reservoir/tank it means that it has already passed water tightness test, including sterilising and flushing (unless not permitted), and the reservoir/tank is ready to be commissioned and placed into service.
- iii) For water treatment plant it means that it has already passed all the required tests, regulation compliance and can produce the water with quality and quantity as specified.
- iv) For booster pump it means that it has passed all the required tests, regulation compliance and the pump can perform as specified.

For outstanding work and defects please make sure these works are not substantial and can be completed without reasonable disturbance of the Employer's full enjoyment and occupation or usage of the facility. It is considered that there may be components like external works, chambers and reinstatement, which are incomplete, but the extent of uncompleted works is not substantial and it should not detracts from the enjoyment and use of the subject facilities.

If substantial of works are still incomplete but the actual use or required purpose of the works has been met, the Employer may request for partial possession or occupation for that part of works and that part is deemed to have reached practical completion.

As a guide the total value of outstanding works and defects should not be more than the value of performance bond or retention sum.

5.3.4 Letter of undertaking to complete outstanding works by the Contractor

The Contractor should give a written undertaking to complete such outstanding work within such times as agreed by the Contract Administrator.

5.3.5 Certificate of Practical Completion and List of Outstanding Works and Defects

Upon the undertaking by the Contractor to complete outstanding work (if any), the contract administrator is obliged to certify the practical completion of the work once it occurs by issuing certificate of practical completion. Record of outstanding and defects work by way of schedule should be attached to the certificate, together with the terms of agreement with the Contractor for its completion.

5.4 Conclusion

The contract administrator is obliged to issue a Certificate of Practical Completion when it occurs. He should exercise his discretion with caution in respect of the very minor items of work left incomplete and the state of defects in deciding whether its will affect the issue of practical completion certificate.

CHAPTER 6

CONCLUSION

6.1 Introduction

This chapter will summarize and provide conclusion for this research as well as recommendations for further research.

6.2 Research Finding

The objectives of this research are to determine legal meaning or definition of practical completion of works based on cases of law and to develop a guideline that can assists in certifying practical completion for water supply projects.

A few stages had to be gone through before reaching the finding of this research. To realize the objective of this research, an understanding of the principles of practical completion based on provision in the standard form of contract, commentary and literature in the books should be sought first. Then, the analysis on courts' decision or finding on defining of terms of completion of works had been carried out based on cases of law reported. The issues of outstanding and defect works are also examined to see whether it will prevent the works from being certified as practically completed. The legal meaning of practical completion then will be suggested. Principle of practical completion has been discussed in Chapter 3 and reviewed and analysis of legal meaning of practical completion discussed in Chapter 4.

To develop a guideline for certifying practical completion for water supply projects, the analysis has been done to a few projects completed by SAJ Holdings Sdn Bhd. The history, principal activities and significance of their capital works in providing infrastructures for water supply has been discussed in Chapter 2. In Chapter 5 the analysis of the completed water supply projects with emphasize on how the practical completion was being certified and whether it was consistent with the suggested legal meaning of practical completion and precedent set by the court has been discussed. Then, a guideline will be proposed to assists in certifying practical completion for water supply projects.

It was found that the standard forms of contract adopt different procedures for identification of completion of works. PAM 1998 and IEM 1989 at least did provide definition for practical completion although it may still be subject to an argument by the contracting parties. Based on the provision of practical completion in the various standard form and the guidance and commentary from the learned authors, it seems that the meaning of practical completion is still not settled although that phrase has been used and found in many standard forms over the decades. It might be thought that such provisions in the Contract will give complete discretion to the Contract Administrator to decide what "practical completion" is, as well as whether it has been achieved, but it is well established in law that, in deciding any matter which is stated to be his opinion or

decision, he must consider and take account not only the facts and the individual circumstances but also the specific terms of the contract and the common law as expressed in decisions of the courts.

In general, practical completion might occur when the works are ready for occupation in all ways relevant to the contract and are free from known omission or defects (subject to the Latin *maxim de minimis non curat lex*, i.e. that the law is not concerned with trivial matters).

Based on the practicalities of construction works, the provisions of all the standard forms, the decisions of the court, the comments from the learned authors, the writer's experiences and common sense, the writer therefore suggested that the correct legal meaning or definition of practical completion is as follow:

“Practical completion occurs when the Works has reached such a stage of completion that they are capable of being occupied or used by the Employer for the purpose for which they are apparently required or intended, notwithstanding the presence of minor outstanding works and trivial defects”.

From the proposed definition, it means that, for the contract administrator to exercise his opinion, what has to be considered is a particular criteria rather than an abstract and undefined concept; and the actual use of the works by the employer for the required purpose or intended will be prima facie evidence that the criteria has been met, regardless of the presence of minor outstanding works or trivial defects. In the case of substantial of works still incomplete but the actual use or required purpose of the works has been met, the Employer may request for partial possession or occupation for that part of works that part is deemed to have reached practical completion.

It is worth to take note that it is always possible for the parties to agree to amend the terms of the contract between them in light of the situation it has developed, and in

most of these situations both parties may be seeking some concession and both parties may have some bargaining power. Usually the employer will be anxious to have use of the works and the contractor will be anxious to get a certificate of practical completion. Any such agreement must, of course, be made between the parties themselves; but the experience in the case of *Impressa* and *Skanska* shows how important it is that any agreement to amend the terms of the contract should clearly define exactly what has been agreed, and the parties understand all the implications.

From the analysis of a few completed water supply projects; although all the facilities constructed can be used as intended, if there is any substantial incomplete works, it is suggested not to issue practical completion for that part of works until it is complete and can be occupied. The employer can use the completed works if he wants to by taking partial possession or occupation.

A guideline for certifying practical completion of water supply projects has been developed based on the issues found, practicalities and guided with the legal meaning as suggested. This guideline hopefully can be used to help the Contract Administrator who act as certifier to make a better decision whether to certify the works practically completed or not. This guideline will also deal with the issue of outstanding and defects works.

6.3 Recommendation for Further Study

Due to limited time, the writer only managed to come out with general guideline for certifying practical completion for water supply projects. It is suggested that in the future, a standard assessment for quality of works needs to be developed; not only for water supply projects but for other types of construction as well. This standard assessment then will be used as part of the criterion to determine practical completion of the works.

6.4 Conclusion

It would thus be beneficial to the contracting parties if an unambiguous definition and guideline for certifying of practical completion is provided in the documents. The Contractor may plan the works based on the intent of the contract so that principal areas will be ready for occupation or use by the due date for completion and some less critical outstanding works may be completed during the defects liability period. This situation is very common especially when the project is on the tight construction schedule.

If such flexibility is not introduced, there may be situations where the Employer cannot use completed areas. This is because “practical or substantial completion” is different from “substantial performance”. In the latter case, a party who is not even in full compliance with the entire terms of the contract may be entitled to recover the contract amount less the value of incomplete works.

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