

COMMERCE ACT 1986: BUSINESS ACQUISITION SECTION 66: NOTICE SEEKING CLEARANCE

7 November 2013

The Registrar
Business Acquisitions and Authorisations
Commerce Commission
PO Box 2351
WELLINGTON

Pursuant to section 66(1) of the Commerce Act 1986 notice is hereby given seeking **clearance** of a proposed business acquisition.

SUMMARY OF APPLICATION

1. Thermo Fisher Scientific Inc. ("**Thermo Fisher**") seeks clearance for Polpis Merger Sub Co (a wholly owned subsidiary of Thermo Fisher), or nominee, to amalgamate with Life Technologies Corporation ("**Life Technologies**") (together, Thermo Fisher and Life Technologies are the "**Parties**"), to form a merged entity ("**Mergeco**") that will be a wholly owned subsidiary of Thermo Fisher (the "**Merger**").
2. The Parties are diversified global life sciences businesses. The purpose of the Merger is to combine the Parties' complementary businesses, in line with Thermo Fisher's strategy of accelerating growth by increasing its portfolio of products and expanding its geographic reach in order to meet customer demand.
3. The Merger will not substantially lessen competition as:
 - (a) In each of the relevant product markets, Mergeco will face competition from a number of large, well-resourced global competitors, including GE Healthcare, Sigma-Aldrich, Merck Millipore, Moregate Biotech, Lonza, and Bio-Rad.
 - (b) Reflecting the complementary nature of the Parties' product ranges, there is no market in which the Parties' estimated combined market shares fall outside the Commission's concentration indicators, and the degree of overlap between the Parties' businesses is more than *de minimis*.
 - (c) There is only one narrowly defined market segment in which the Commission's concentration indicators are exceeded, where the increment in estimated market share is greater than [CONFIDENTIAL]%. That segment is the sale of a cell culture product, New Zealand origin foetal bovine serum ("**FBS**"), to customers in the research sector. Even in this narrowest market segment of New Zealand origin FBS sold to research customers, the estimated market share increment arising from the Merger is less than [CONFIDENTIAL]%.
 - (d) The Parties do not consider New Zealand origin FBS sold to research customers to be a relevant product market in itself, as the FBS that is sold to research customers is the same product as that sold to bioproduction customers, through the same distribution structure, and there are no other reasons in the New Zealand market context to define the market by customer type. In addition, there is a high degree of substitutability between New Zealand origin and Australian origin FBS, such that at least one of the Parties'

customers uses a single product code to describe both products. Accordingly, from the Parties' perspective the narrowest relevant market might be the sale of New Zealand origin FBS to research and bioproduction customers in New Zealand. In that market, the Parties' estimated combined shares do not exceed the Commission's concentration indicators.

- (e) Moreover, on the supply side, the Parties do not control the key input for the production of New Zealand origin FBS. That input is recognised internationally to be in short supply, so the sellers can and do exercise significant countervailing power.
 - (f) Finally, customers of life sciences businesses (including the Parties' customers) are generally large, sophisticated procurers, such as universities, bioproduction companies, and the District Health Boards, often purchasing through healthAlliance. These customers have the resources, know-how and expertise to exert their bargaining power and/or seek alternative supply, either from the Parties' competitors or by sponsoring new entry.
4. Accordingly, the Merger will not substantially lessen competition in any New Zealand life sciences market in which the Parties compete.
5. [CONFIDENTIAL]

PART 1: TRANSACTION DETAILS**1. Provide the name of the acquirer (person giving notice), and the name and position of the individual responsible for the notice.**

1.1 This notice is given by Thermo Fisher.

1.2 Contact details for Thermo Fisher are as follows:

Jonathan C. Wilk
 Vice President, Deputy General Counsel,
 General Counsel, Analytical Technologies Group
 Thermo Fisher Scientific Inc.
 81 Wyman Street
 Waltham, MA 02454
 United States of America
 [CONFIDENTIAL]

1.3 All correspondence and notices in respect of the application should be directed in the first instance to:

Russell McVeagh
 Barristers & Solicitors
 PO Box 8
 AUCKLAND 1140

Attention: Sarah Keene / Luke Bulling
 Telephone: 09 367 8133 / 09 367 8716
 Fax: 09 367 8595 / 09 367 8596
 Email: sarah.keene@russellmcveagh.com /
 luke.bulling@russellmcveagh.com

2. Provide the name of the other merger parties, and the name/position of the relevant individual within the relevant merger parties.

2.1 The contact details for Life Technologies are as follows:

Genoffir MacLeod
 General Counsel (EMEA/APJ/GC)
 Life Technologies Corp
 3 Fountain Drive
 Inchinnan Business Park
 Paisley PA4 9RF
 Renfrewshire
 Scotland
 United Kingdom
 [CONFIDENTIAL]

2.2 All correspondence for Life Technologies should be directed at first instance to:

Bell Gully
 Barristers & Solicitors
 PO Box 4199
 AUCKLAND 1140

Attention: Torrin Crowther / Glenn Shewan
 Telephone: 09 916 8621 / 09 916 8726
 Fax: 09 916 8801
 Email: torrin.crowther@bellgully.com /
 glenn.shewan@bellgully.com

3. With respect to the merger parties, list the relevant companies and the person or persons controlling these directly or indirectly. Please use organisational charts or diagrams to show the structure of the ownership and control of the acquirer and participant(s) to the acquisition.

Thermo Fisher

- 3.1 The organisational chart at Confidential Appendix 1 sets out the organisational structure of Thermo Fisher and its subsidiaries.
- 3.2 Thermo Fisher is a company incorporated in Delaware with its headquarters in Waltham, Massachusetts, USA. Thermo Fisher is a diversified, global manufacturing company whose principal activity is the production and sale of analytical instruments, scientific equipment, consumables, reagents, services and software for research, analysis, discovery and diagnostics. Thermo Fisher's products are supplied to pharmaceutical and biotech companies, manufacturers, hospitals and clinical diagnostic laboratories, universities, research institutions and government agencies, as well as environmental and industrial process control settings.
- 3.3 Thermo Fisher is a public company listed on the New York Stock Exchange (NYSE: TMO). Thermo Fisher's revenues in the financial year 2012 were US\$12.5 billion.
- 3.4 In New Zealand, Thermo Fisher operates through its five subsidiaries:
- (a) Thermo Fisher Scientific New Zealand Holdings Limited;
 - (b) Thermo Fisher Scientific New Zealand Limited;
 - (c) Thermo Fisher Scientific Tauranga Limited;
 - (d) Oxoid New Zealand Limited; and
 - (e) Ajax Finechem (NZ) Limited,
- each of which are companies registered under the Companies Act 1993.
- 3.5 Thermo Fisher Scientific New Zealand Limited and Thermo Fisher Scientific Tauranga Limited are trading entities. Thermo Fisher Scientific New Zealand Holdings Limited is a holding company. Oxoid New Zealand Limited and Ajax Finechem (NZ) Limited are currently in the process of being deregistered.
- 3.6 In April 2009, Thermo Fisher acquired the "Biolab Group", consisting of a New Zealand company (Biolab Limited) and an Australian company (Biolab Aust. Limited). Biolab Limited was renamed Thermo Fisher Scientific New Zealand Limited, and Thermo Fisher has used the Biolab Group's existing local distribution structure since.

Life Technologies

- 3.7 The organisational chart at Confidential Appendix 2 sets out the organisational structure of Life Technologies and its subsidiaries.
- 3.8 Life Technologies is a global biotechnology tools company incorporated in Delaware with its headquarters in Carlsbad, California, USA. It is active in the production and supply of technologies for a range of life sciences applications, including gene sequencing, polymerase chain reaction, sample preparation, cell culture, RNA interference analysis, functional genomics research, proteomics and cell biology applications, as well as clinical diagnostic applications, forensics and animal, food, pharmaceutical and water testing analysis. Life Technologies' products are supplied to

universities, medical and research institutions, government agencies and companies in a diverse range of industries.

- 3.9 Life Technologies was formed in 2008 by the merger of Invitrogen Corporation and Applied Biosystems, Inc. It is a public company listed on the NASDAQ Global Select Market (NASDAQ: LIFE). Life Technologies' revenues in the financial year 2012 were US\$3.8 billion.
- 3.10 In New Zealand, Life Technologies operates through its subsidiary, Life Technologies New Zealand Limited, a company registered under the Companies Act 1993.

4. Provide details on what is to be acquired.

- 4.1 Thermo Fisher seeks clearance for Polpis Merger Sub Co, or nominee, to amalgamate with Life Technologies.
- 4.2 Relevant to New Zealand, the Merger will involve Thermo Fisher acquiring direct or indirect control of Life Technologies New Zealand Limited.

5. Explain the commercial rationale for the proposed merger.

- 5.1 The Merger is part of an international transaction.
- 5.2 The Merger allows Thermo Fisher to access new growth areas in which it currently has no presence, including next-generation sequencing, capillary electrophoresis, purification products and digital polymerase chain reaction, while also expanding into the forensics, animal health and cancer diagnostics sectors. Moreover, the Merger will enhance Thermo Fisher's presence in emerging markets, particularly in Asia.
- 5.3 Life Technologies' product ranges enjoy a high degree of recognition among life science research customers (where Thermo Fisher has not traditionally had a strong presence). They offer significant growth potential and are an excellent fit with Thermo Fisher's existing business, complementing its existing product portfolio and brands.
- 5.4 The merged business will also benefit from the combination of Thermo Fisher and Life Technologies' capabilities in distribution and supply chain management, e-commerce and research and development. The Merger is expected to give rise to substantial synergies, in the order of US\$250 million, realised over three years.

6. Provide copies of the final or most recent versions of any document bringing about the proposed merger.

- 6.1 A copy of the Agreement and Plan of Merger by and among Life Technologies, Thermo Fisher, and Polpis Merger Sub Co, dated 14 April 2013 is **enclosed** as Confidential Appendix 3.

7. If any other jurisdiction's competition agency has been (or will be) notified of the proposed merger, please list each competition agency notified (or to be notified) and the date of the notification.

- 7.1 The Parties are currently assessing the notification of the Merger in a number of jurisdictions. Of those, the Parties have notified or expect to notify in at least the jurisdictions identified in figure 1 below (with certain others still possible and to be confirmed).

Figure 1 - Overseas regulators notified of the Merger

Agency	Jurisdiction	Date notified
European Commission	European Union	7 October 2013
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
Australian Competition and Consumer Commission	Australia	9 September 2013
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL] ¹

PART 2: THE INDUSTRY

8. Describe the relevant goods or services supplied by the merger parties (it is sufficient to refer in general terms to activities in which there will be no aggregation).

8.1 For detailed descriptions of the products and markets to which this application relates in particular, please see section 9 below.

Thermo Fisher's business in New Zealand

8.2 Thermo Fisher supplies its own branded products in New Zealand as well as those of other respected global brands to customers in the healthcare industry, offering medical and surgical devices and consumables, and diagnostic imaging instrumentation. These product ranges are supported by product and technical specialists. It has office locations in Auckland, Wellington, Palmerston North, and Christchurch to provide technical support.

8.3 There are three key product lines in New Zealand: scientific; environmental and industrial; and healthcare. Scientific products range from laboratory instrumentation to consumables, with applications in various sectors, including academia, research, life sciences, pathology, biotechnology and food and beverage testing. The environmental and industrial process product range consists of innovative technologies for complying with government regulations and industry safety standards, or responding to hazardous material situations. Thermo Fisher's healthcare products primarily serve diagnostic testing needs in diagnostic laboratories, hospitals, and universities. The key product line relevant to the Merger is the scientific products.

8.4 For the year ending 31 December 2012, the revenue for Thermo Fisher Scientific New Zealand Limited (as set out in the consolidated financial statements of Thermo Fisher Scientific New Zealand Holdings Limited) was approximately [CONFIDENTIAL].

Life Technologies' business in New Zealand

8.5 Life Technologies' New Zealand business involves the manufacture and supply of life science and bio-medical products used in the study of disease, genetic therapy research, vaccines, therapeutic drugs and disease testing. Life Technologies New Zealand Limited has [CONFIDENTIAL] employees across its three sites in New Zealand: [CONFIDENTIAL] in Auckland, [CONFIDENTIAL] in Christchurch and [CONFIDENTIAL] in Nelson.

¹ [CONFIDENTIAL]

- 8.6 Life Technologies New Zealand Limited's manufacturing focus in New Zealand is the production of sera. Outside of this, it sells a range of products in New Zealand which broadly fall into the categories of protein biology, molecular biology, HLA typing, cell culture and sample preparation. Life Technologies New Zealand Limited's customers include universities, research facilities and healthcare providers.
- 8.7 For the year ending 31 December 2012, Life Technologies New Zealand Limited's revenue (as set out in its annual report) was [CONFIDENTIAL]. The vast majority of Life Technologies New Zealand Limited's revenue is derived from the export out of New Zealand of manufactured products.
9. **Describe the industry or industries affected by the proposed acquisition. Where relevant, describe how sales are made, the supply chain(s) of any product(s) or service(s) involved, and the manufacturing process. If relevant, provide a glossary of terms and acronyms.**

Life Sciences Industry

- 9.1 Each of the Parties is a diversified manufacturer of a wide range of products for use in scientific applications. Consequently, the Parties are active in a large number of product markets. The markets in which there is an overlap (however limited) between the Parties' businesses globally can be placed into five broad categories:
- (a) cell culture;
 - (b) transplant diagnostics;
 - (c) protein biology;
 - (d) molecular biology; and
 - (e) other minor overlap areas.

In New Zealand, in all of the product markets within these categories, the Parties' estimated combined market shares fall within the Commission's concentration indicators, or the degree of overlap between the Parties' businesses is *de minimis*, or both (see section 12). It is only if an extremely narrow definition of one segment of the FBS market is considered [CONFIDENTIAL] that the Parties' estimated combined shares would exceed the Commission's concentration indicators. [CONFIDENTIAL] To allow the Commission to better understand this market and why such segmentation is not appropriate in the New Zealand market context, a brief description and overview of the FBS supply chain is set out below.

FBS

Processing of FBS

- 9.2 To produce FBS, raw foetal bovine blood ("**FBB**") is purchased from suppliers and transported to processing facilities (at 3-7°C) within 24 to 48 hours of collection and "spun" with a centrifuge, and is then frozen (the product of this process is called "raw serum"). To then process the raw serum into a finished product for the end customer, it is thawed, pooled, sterile filtered, bottled and labelled. The finished product is frozen at -20°C.
- 9.3 Thermo Fisher processes FBS in Tauranga and Christchurch. Life Technologies has processing facilities in Auckland and Christchurch.

Sale of FBS

- 9.4 The vast majority of the FBS produced by Thermo Fisher and Life Technologies in New Zealand is exported.
- 9.5 In New Zealand Thermo Fisher and Life Technologies sell FBS for use in research and bioproduction applications, under the brand names HyClone and Gibco, respectively. Research customers in New Zealand include universities as well as Crown Research Institutes such as [CONFIDENTIAL]. Life Technologies also sells FBS for use in bioproduction applications.²
- 10. Describe the current industry trends and developments including the role of imports and exports, emerging technologies, and/or changes in supply and demand dynamics.**

Life Sciences Industry

Constant innovation

- 10.1 In all areas of the life sciences sector, constant innovation is an important element of competition. The global life sciences industry is characterised by a large number of players with extensive R&D capabilities and activity. The large majority of this research is carried out in-house by the life sciences companies themselves, but important R&D also occurs through numerous academic and commercial laboratories.
- 10.2 Typically, life sciences companies dedicate around [CONFIDENTIAL]% of their total annual turnover to R&D. In 2012, for example, Thermo Fisher spent [CONFIDENTIAL]% of its annual turnover for the entire molecular biology business on new product development. Life Technologies also invested very substantial sums in its R&D effort in 2012, allocating some [CONFIDENTIAL] to innovation and new product development across the business.

Online purchasing

- 10.3 Online purchasing is a significant feature of the life sciences industries, with most of the leading suppliers offering online purchasing through their own websites or e-commerce platforms. Online orders account for around [CONFIDENTIAL] of Thermo Fisher's current sales globally, but this figure is rapidly growing, at around [CONFIDENTIAL] per annum. Customers therefore do not require their supplier to have a national sales presence in order to transact an order and, in practice, national sales forces are small and focused on relationship management and establishing a brand presence.

Global consolidation

- 10.4 In recent years, there has been a number of mergers in the life sciences industry. GE Healthcare's merger with PAA Laboratories and Merck KGaA's merger with Millipore are two examples of this trend.

FBS

Supply of raw FBB

- 10.5 Total supply of raw FBB for production of FBS has decreased significantly in recent years. Factors include drought in the North Island and market dynamics in the dairy and

² [CONFIDENTIAL]

meat sectors.³ This will not change following the Merger. The supply of raw FBB will remain restricted while at the same time, global demand for finished New Zealand and Australian FBS remains strong. With or without the Merger, the Parties expect competition for raw FBB to remain intense, [CONFIDENTIAL].⁴

New entrants

10.6 At the same time in response to the demand for New Zealand raw FBB some suppliers have moved into processing FBS themselves. [CONFIDENTIAL]

10.7 In addition, [CONFIDENTIAL], one of the Parties' global competitors, has recently made a substantial investment in establishing a new processing plant in New Zealand.⁵

11. Please highlight any relevant mergers that have occurred in this industry over the past three years.

11.1 Significant mergers that have occurred in the past three years in the life sciences sector globally include GE Healthcare's 2011 acquisition of PAA Laboratories, Merck KGaA's 2010 acquisition of Millipore, and Corning's 2011 acquisition of Mediatech.

PART 3: MARKET DEFINITION

Horizontal Aggregation

12. For each area of aggregation of market shares, please define the relevant market(s).

12.1 As outlined at paragraph 9.1 above, the markets in which there is an overlap (however limited) between the Parties' businesses globally can be placed into five broad categories:

- (a) cell culture;
- (b) transplant diagnostics;
- (c) protein biology;
- (d) molecular biology; and
- (e) other minor overlap areas.

In New Zealand, if each of those categories is broken down into individual product markets, then either the Parties' estimated combined market shares are within the Commission's concentration indicators, or the increment is between [CONFIDENTIAL]% and [CONFIDENTIAL]% and, therefore, *de minimis*.

12.2 For the vast majority of the overlapping product markets in New Zealand, the Parties' estimated combined market share is within the Commission's concentration indicators. Accordingly, the Parties do not propose to address these markets further in this application, but for the sake of completeness, these products are set out below:

³ Life Technologies estimates that the total volume of raw FBS available in New Zealand in 2012 was [CONFIDENTIAL] litres, down from [CONFIDENTIAL] in 2010. Up to 600ml of raw foetal bovine serum can be obtained from one litre of raw FBB.

⁴ See, for example, *Regenerative Medicine*, "Peak serum: implications of serum supply for cell therapy manufacturing" (2012) 7(1), 7–13. [CONFIDENTIAL]

⁵ [CONFIDENTIAL]

- (a) in cell culture: calf sera, cell culture media and standard process liquids;⁶
 - (b) in protein biology: cell lysis detergents, cell lysis reagents, cell lysis inhibitors, SDS-PAGE products (vertical gel boxes, horizontal gel boxes, power supplies, gel stains), western blotting products (membranes, chemiluminescent substrates), enzyme-linked immunosorbent assays, protein modification products (chemical modification reagents, proteases), primary antibodies, secondary antibodies, biotin reagents, streptavidin and avidin reagents, reactive dyes, and detection kits; and
 - (c) in molecular biology: cloning enzymes, restriction enzymes, modifying enzymes, magnetic bead instruments, horizontal gel boxes, thermal cyclers (for PCR applications), qPCR instruments, Taq polymerase, other thermostable DNA polymerase (excluding Taq polymerase), high fidelity polymerase, hot start polymerase, other speciality polymerase, PCR kits, RT PCR kits, dye-based qPCR kits, consumables, home-brew agarose, silica NA purification kits, standalone probes and assays, standard PCR reagents, and deoxynucleotide triphosphates (dNTPs).
- 12.3 The Parties' businesses in New Zealand also overlap in markets for SDS-PAGE pre-cast gels and nucleic acid standards. In each of those markets, the Parties' estimated combined market share is outside the Commission's concentration indicators, however the degree of overlap is *de minimis*, at [CONFIDENTIAL]% and [CONFIDENTIAL]% respectively. Accordingly, the Parties do not propose to address these markets further in this application.
- 12.4 In addition, in the transplant diagnostics category, the Parties both sell human leukocyte antigen ("HLA") typing kits. Each type of HLA typing kit is used for distinct purposes and is not a substitute for the other. Globally, the only type of HLA typing kits which are sold by both Parties is Sequence Specific Primers ("SSP") HLA typing kits. However, in New Zealand, Thermo Fisher does not supply SSP HLA typing kits (although it does supply Sequence Specific Oligonucleotides ("SSO") HLA typing kits, which Life Technologies does not supply). Accordingly, there is no overlap between the Parties' businesses in transplant diagnostics, and the Parties do not propose to address that area of business in the remaining sections of this application.
- 12.5 Finally, the Parties' businesses overlap in the national market for the processing/importation and sale of Australian and New Zealand origin FBS for research and bioproduction customers in New Zealand. In that market, the Parties' estimated combined market shares fall within the Commission's concentration indicators. However, in one narrowly defined segment of that market, namely the processing/importation and sale of New Zealand origin FBS to research customers, the Parties' estimated combined shares fall outside the Commission's concentration indicators (see section 17 below). The Parties do not consider that such a narrow market definition is appropriate but, for completeness, will address the issues raised in this narrowly defined segment. The Parties' businesses also overlap on the acquisition side of the FBS business, in respect of the acquisition of the primary input, raw FBB.
- 12.6 Accordingly, the market for the processing/importation and sale of Australian and New Zealand origin FBS is described in detail in the balance of this application.
- 12.7 [CONFIDENTIAL]

⁶ [CONFIDENTIAL]

The national market for the processing/importation and sale of Australian and New Zealand FBS

Sera and FBS

- 12.8 Cell culture sera and media comprise a distinct range of products which provide the nutrients and environment, respectively, for cells growing in vitro (outside the living body), in research and bioproduction applications.
- 12.9 Serum is the liquid portion left after blood is allowed to clot. It contains nutrients, proteins, growth factors and other compounds and is used in cell cultures to stimulate cell reproduction. Research applications include physiology, immunology, oncology, pathology, neuroscience, stem cells and virology. In the bioproduction sector, sera are used for the manufacture and control of human and veterinary vaccines and drugs. FBS is by far the most widely used growth supplement for cell culture media, due to its versatility arising from a very low level of antibodies and a high growth factor content.
- 12.10 Other types of sera include calf serum, adult bovine serum, sera from other species, and engineered sera products. These types of sera are generally not considered to be substitutes for FBS by customers.

Processing and importation

- 12.11 Firms that wish to sell Australian and New Zealand FBS in New Zealand can do so by processing New Zealand FBS or by importing Australian FBS. From a demand-side perspective, there is no difference between the two sources, aside from country of origin-related factors addressed in the paragraphs below and in section 13. Accordingly, the Parties consider New Zealand origin FBS that is processed in New Zealand to be a substitute for Australian origin FBS that is imported into New Zealand, and vice versa, and the two should be considered within a single market.

Customer type

- 12.12 Bioproduction and research customers purchase FBS in different ways. Research customers typically purchase small volumes of standardised catalogue products on a commodity basis, although some larger research customers may also go out to tender if they are purchasing large volumes. Bioproduction customers tend to buy large FBS lots in which both price and quality (in terms of traceability and consistency) are both important considerations.
- 12.13 Critically, the risks of contamination are of more acute concern to bioproduction customers due to the quantity in which they purchase FBS and the regulatory controls on their activities, particularly as regards products for human use. FBS purchased by bioproduction customers is used for large scale commercial manufacturing of drugs or vaccines. The resulting end products for bioproduction customers must therefore be accompanied by specific certification. The potential impact on large patient populations makes consistency and safety major concerns. Bioproduction customers therefore place relatively greater weight on the origin of FBS and the protocols followed in collecting, processing and delivering the FBS than research customers.
- 12.14 The priorities for bioproduction customers in sourcing FBS products are therefore (i) securing supply; (ii) traceability of the product; (iii) perceived safety; and (iv) price. Research customers place a greater emphasis on price, since they are not buying in large volumes and are not manufacturing drugs for human use, where traceability is crucial.

- 12.15 Globally, most large FBS suppliers supply both research and bioproduction customers, but there are also some suppliers that focus on meeting the needs of research customers.

Country of origin

- 12.16 Among purchasers of FBS globally, there is a preference for FBS of Australian and New Zealand origin as it is perceived to be of the highest quality due to the low risk of bovine disease contamination.⁷
- 12.17 The risk of contamination is of greater concern to bioproduction customers due to the quantity in which they purchase FBS and the regulatory controls on their activities, particularly as regards products for human or animal health use. Accordingly, while both groups of customers prefer Australian and/or New Zealand-origin FBS, this preference is strongest among bioproduction customers.
- 12.18 Customers can and do switch, however, between New Zealand and Australian FBS, such that no further sub-segmentation by country of origin is warranted between FBS sourced from these countries. This is because BSE, FMD and other cattle diseases have not been known to occur in either Australia or New Zealand in recent history.⁸
- 12.19 Australian FBS and New Zealand FBS have the same risk profile and are functionally substitutable. Obviously, at a given price, most customers do still have a preference for the origin of their FBS (often in New Zealand this preference is for New Zealand origin FBS,⁹ but some New Zealand customers' first preference is Australian origin FBS¹⁰).
- 12.20 Internationally, some research customers and bioproduction customers will accept also US FBS as a substitute for New Zealand or Australian origin FBS. In New Zealand there are no examples available to the Parties of research customers needing to switch away from New Zealand origin FBS, partly because the market is so small with so few transactions, and partly because the Parties' competitors appear to have significant reserves of New Zealand origin FBS. Thermo Fisher's experience has been that if it does not have sufficient supply to meet a New Zealand customer's demand, it simply loses that sale, and it is not told who it lost to or what product the customer ultimately purchased.
- 12.21 However, buying behaviour in Australia is similar to New Zealand, and the regulatory requirements are also similar. As Australia is a larger market, with more transactions, there are more examples of switching between Australian and New Zealand FBS in Australia.

A national market

- 12.22 FBS is readily transported, although it must remain cold (at -20°C). Each of Thermo Fisher and Life Technologies sells and freights FBS to customers in various locations in New Zealand, and customers will usually seek prices from a number of suppliers

⁷ Demand for FBS sourced from New Zealand and Australia reflects concerns about the potential for contamination of FBS sourced from other parts of the world due to the occurrence (or potential occurrence) of cattle diseases and viruses such as mad cow disease ("BSE"), foot and mouth disease ("FMD"), bluetongue, and akabane viruses.

⁸ There was an outbreak of Rinderpest in Australia but that was over 50 years ago.

⁹ In New Zealand, to use Australian FBS requires more paperwork and in the Parties' experience, to the extent non-NZ FBS has been discussed with customers, this has been a factor in the customer's choice. Both the supplier and the customer require a transitional facility certificate, which will be valid for the products and purposes specified for the multi-year duration of the certificate. Accordingly, it is a one-off paperwork requirement.

¹⁰ [CONFIDENTIAL] Australian FBS sold or proposed to be sold in New Zealand is gamma-irradiated to remove any viruses that could be present.

nationwide before making a purchase decision. Accordingly, the market for FBS is a national one.

Input acquisition

- 12.23 In the market for the processing/importation and sale of Australian and New Zealand FBS, New Zealand based processors of New Zealand origin FBS, such as the Parties, need to acquire raw FBB in order to produce FBS.
- 12.24 Raw FBB that has been collected from suppliers must be transported to processing facilities (at 3-7°C) within 24 to 48 hours of collection. On each of the North and South islands, purchasers (including Thermo Fisher and Life Technologies) will collect the material and transport it to a processing facility located on that island. While it would be possible to transport the material between the two islands at the required temperature and within the required timeframe, this occurs rarely if at all in practice.
- 13. Where relevant, please explain how products or services are differentiated within the market(s).**
- 13.1 FBS products are differentiated by country/region of origin only.
- 13.2 All sera and media products, including FBS, are 'open systems' (ie sera from one supplier can be used with any other supplier's media products). There is no meaningful differentiation between FBS from different suppliers, and there are no switching costs associated with using FBS from one supplier instead of another.
- 13.3 As set out in section 12, bioproduction customers globally have a preference for FBS of Australian and New Zealand origin. This is due to the considerably lower risk of exposure to cattle diseases and viruses such as BSE, FMD, bluetongue, and akabane viruses. The preference for Australian and New Zealand FBS is not as strong among research customers, and in recent years, in the context of higher prices for FBS, particularly Australian and New Zealand FBS, some FBS of United States origin has been imported and sold to research customers in New Zealand (although not by the Parties). While historically, Australian and New Zealand FBS has been considered to have a lower contamination risk profile than US (or other) FBS, this distinction is believed to be waning. In May 2013, for example, the World Organisation for Animal Health ("OIE") declared the risk of BSE in US cattle herds to be negligible, putting US FBS at the same level of risk as Australian and New Zealand origin FBS.¹¹ Because the OIE has classified the risk from the US and several other major beef producers (including most South American producers) as comparable to that of the Australian and New Zealand producers, it is anticipated that the historical bioproduction preference for Australian and New Zealand sera will decline over time.
- 13.4 Bioproduction customers request quotes from companies regularly in order to create a competitive tendering process. They tend to buy large sera lots in which both price and quality (in terms of traceability and consistency) are important considerations. Further, each bioproduction customer may have its own unique set of quality requirements,

¹¹ Specifically, the OIE recognised the US, Israel, Italy, Japan, the Netherlands, and Slovenia as having a "negligible bovine spongiform encephalopathy (BSE or mad cow disease) risk." World Organisation for Animal Health, *Recognition of the Bovine Spongiform Encephalopathy Risk Status of Member Countries*, Gen. Session Res. 20 (May 28, 2013), at 1, http://www.oie.int/fileadmin/Home/eng/Animal_Health_in_the_World/docs/pdf/A_Resolution_2013_20_BSE.pdf. See also Press Release, World Organisation for Animal Health, 81st General Session of the World Assembly of Delegates of the World Organisation for Animal Health (OIE) (May 29, 2013), <http://www.oie.int/for-themedia/press-releases/detail/article/81st-general-session-of-the-world-assembly-of-delegates-of-the-worldorganisation-for-animal-health>.

including cGMP (current good manufacturing process) manufacturing requirements that a serum supplier must meet to be considered as a source of supply.

- 13.5 Research customers typically purchase small volumes of standardised catalogue sera products on a commodity basis, although some larger research customers may also go out to tender if they are purchasing large volumes. Customers will, however, often request a small sample of FBS before committing to a purchase so that they can carry out tests to confirm the suitability of a particular batch of FBS for their intended application.
- 13.6 Research customers are particularly price conscious and typically seek quotes from multiple suppliers before submitting an order. Crown Research Institutes and universities in particular are large, price sensitive customers that exercise significant countervailing market power. Such customers typically have implemented or are currently implementing collective purchasing arrangements which will result in increased constraint on sellers of FBS.
- 13.7 The key difference between the two customers sets is that the risks of contamination are of more acute concern to bioproduction customers due to the quantity in which they purchase the sera and the regulatory controls on their activities, particularly as regards products for human or animal health use. Sera purchased by bioproduction customers are used for large scale commercial manufacturing of drugs or vaccines (whereas the remainder is used for non-vaccine purposes such as gene engineering, protein, antibodies). The resulting end product for bioproduction customers must therefore be accompanied by specific certification and the serum manufacturer must have appropriate cGMP facilities and systems in place that are approved by customer. The potential impact on large patient populations makes consistency and safety major concerns.

VERTICAL INTEGRATION

- 14. Provide details of any creation or strengthening of vertical integration that would result from the proposed merger. Please use organisational charts or diagrams to illustrate the structure of the ownership and/or control of the participants and the vertical relationships in question.**
- 14.1 Both Thermo Fisher and Life Technologies are vertically integrated in the processing/importation and sale of Australian and New Zealand FBS. The Merger will not give rise to any additional downstream or upstream integration as concerns products and markets in New Zealand.

PART 4: COUNTERFACTUAL

- 15. In the event that the proposed merger does not take place, describe what is likely to happen to the business operations of the merger parties and the market/industry.**
- 15.1 The Parties consider the most appropriate counterfactual is the status quo.

PART 5: COMPETITION ANALYSIS

EXISTING COMPETITORS

16. Identify all of the relevant competitors in the market(s), including near competitors and importers in the market(s), and describe how they all compete in the market(s).
- 16.1 Other suppliers that process or sell New Zealand origin FBS in New Zealand or could do so without great difficulty are set out in figure 2 below:

Figure 2 - Other producers of FBS

Firm	Activities
Moregate Biotech	Moregate Biotech supplies life science, biotechnology, research and pharmaceutical companies worldwide with Australian and New Zealand-sourced animal sera, protein, plasma and byproducts. Moregate Biotech produces and sells New Zealand-sourced FBS in New Zealand. [CONFIDENTIAL]
Selborne Biological Services	Selborne is a leading supplier of specialised products of animal origin for biotech, pharmaceutical, veterinary and diagnostics industries. Selborne has facilities in New Zealand capable of processing FBS [CONFIDENTIAL].
GE Healthcare	Headquartered in the UK, GE Healthcare is part of General Electric Company (NYSE: GE). GE Healthcare sells New Zealand-sourced FBS in New Zealand and globally. [CONFIDENTIAL]
Proliant	Proliant is part of the privately owned US-based Lauridsen Group. Proliant will begin producing bovine sera products (but not FBS) in New Zealand from 2015. [CONFIDENTIAL]
South Pacific Sera	Based in Timaru, South Pacific Sera produces sera including adult bovine serum and equine serum, the majority of which is exported. South Pacific Sera has produced FBS in New Zealand in the past, but does not currently do so. Nevertheless, it has the facilities to produce FBS either alone or on behalf of another firm seeking to enter the market for finished FBS (such as a supplier of raw FBS). These facilities include bleeding facilities, large centrifuges, a clean room suite and processing and filtration facilities.
Southern Cross Biotechnologies	Southern Cross Biotechnologies' product range includes animal sera, plasma and other byproducts which it sells to research and bioproduction organisations including cell culture researchers, molecular biologists and biopharmaceutical manufacturers. Southern Cross Biotechnologies' head office is located in Auckland and its processing plant is in Thames. Southern Cross Biotechnologies sells New Zealand-sourced FBS in New Zealand and globally.
Sigma-Aldrich	Sigma-Aldrich is a life sciences company which supplies biochemical products, organic chemical products, kits and services, to research and bioproduction customers for use in genomic and proteomic research, biotechnology, pharmaceutical development, diagnosis, and as

Firm	Activities
	components in pharmaceutical, diagnostics and high technology manufacturing. Sigma-Aldrich produces New Zealand-sourced FBS in New Zealand and sells it globally.
Merck Millipore	Merck Millipore is the life sciences division of Merck KGaA and has operations in research, development, manufacturing, and distribution. Merck Millipore sells New Zealand-sourced FBS in New Zealand and globally. Merck Millipore has an office and production team in New Zealand [CONFIDENTIAL].
Lonza	Lonza Group is a Swiss chemicals and biotechnology company, headquartered in Basel. Lonza supplies products to the life sciences industries for use in bioresearch, pharmaceutical production, nutrition, microbial control, and agriculture. Lonza sells New Zealand-sourced FBS in New Zealand and globally.
MP Biomedicals	MP Biomedicals, headquartered in Southern California, manufactures and sells more than 55,000 products and services for research and bioproduction, including sample preparation and cell culture, genomics, and cell analysis. MP Biomedicals has processing facilities in Auckland which are available for contract processing for other firms.
TCS Biosciences	TCS is a manufacturer and distributor of reagents and test kits for clinical, pharmaceutical, research, food and water sectors. TCS sells New Zealand-sourced FBS (produced by Moregate Biotech) globally.
Desert Biologicals	US-based Desert Biologicals supplies reagents to the biotechnology, research, vaccine and diagnostic industries. Desert Biologicals sells New Zealand-sourced FBS globally.
Gemini Bio-Products	Gemini Bio-Products specialises in cell culture for medical research and development. Gemini Bio-Products has a global presence and sells New Zealand-sourced FBS internationally.
Atlanta Biologics	Atlanta Biologics supplies a wide range of cell culture products and manufacturing services. It has a global network of raw material collection sites, maintaining direct control over the manufacture of FBS. It sells New Zealand-sourced FBS globally.
Biosera/Bioarra	Biosera supplies FBS and ancillary cell culture products globally. Biosera has processing plants at Hamilton and Morrinsville.
Maverick Biosciences	Maverick Biosciences supplies manufacturers of human and veterinary pharmaceuticals, diagnostics, medical devices, and cosmetics, globally. Maverick Bioscience has an office and production team in New Zealand and relationships with five suppliers of raw FBB in New Zealand. Maverick Biosciences does not have a processing facility in New Zealand but does in Australia.
Rocky Mountain Biologicals	Rocky Mountain Biologicals produces bovine protein products for the bioprocessing and clinical diagnostic industries. Rocky Mountain does not currently have a processing facility in New Zealand [CONFIDENTIAL].

17. Outline the estimated market shares in terms of sales, and, where relevant, volume and productive capacity, of the merger parties and competitors identified above. Please include the estimated total value of the domestic market; and the source of the data provided.

FBS sales in New Zealand

- 17.1 As set out in section 13, United States origin FBS is acceptable for some customers and provides a constraint on suppliers of FBS in New Zealand. The Parties consider, however, that the most appropriate view is that the relevant market is one for the processing/importation and sale of Australian and New Zealand origin FBS to research and bioproduction customers in New Zealand. On that basis, the Parties' estimated combined market share is within the Commission's concentration indicators:

Figure 3 - Shares of supply of Australian and NZ FBS (Bioproduction and Research), New Zealand (2012)

	Value	
	(US\$)	(%)
Thermo Fisher	[CONFIDENTIAL]	[CONFIDENTIAL]
Life	[CONFIDENTIAL]	[CONFIDENTIAL]
Combined	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
Others	[CONFIDENTIAL]	[CONFIDENTIAL]
Total	[CONFIDENTIAL]	100.0%

Source: Parties' estimates.

- 17.2 While the Parties consider Australian FBS and New Zealand FBS to be close substitutes, neither of the Parties sold Australian FBS in New Zealand in 2012, meaning the Parties' businesses only overlap in terms of sales of New Zealand FBS. If the market segment is split by country of origin, so that only sales of New Zealand origin FBS to research and bioproduction customers are considered, which the Parties consider to be the narrowest reasonable view of the relevant market, the Parties' estimated combined market share is still within the Commission's concentration indicators:

Figure 4 - Shares of supply of NZ FBS (Bioproduction and Research), New Zealand (2012)

	Value	
	(\$)	(%)
Thermo Fisher	[CONFIDENTIAL]	[CONFIDENTIAL]
Life	[CONFIDENTIAL]	[CONFIDENTIAL]
Combined	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]

Others	[CONFIDENTIAL]	[CONFIDENTIAL]
Total	[CONFIDENTIAL]	100.0%

Source: Parties' estimates.

- 17.3 A further possible market definition reflects the fact that Thermo Fisher does not sell FBS to bioproduction customers in New Zealand. Accordingly, the Parties' businesses only overlap in terms of sales to research customers. In a market defined by customer type, so considering only the sale of Australian and New Zealand FBS to research customers, the Parties' estimated combined share of that market segment is still within the Commission's concentration indicators:

Figure 5 - Shares of supply of Australian and NZ FBS (Research), New Zealand (2012)

	Value	
	(\$)	(%)
Thermo Fisher	[CONFIDENTIAL]	[CONFIDENTIAL]
Life	[CONFIDENTIAL]	[CONFIDENTIAL]
Combined	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
Others	[CONFIDENTIAL]	[CONFIDENTIAL]
Total	[CONFIDENTIAL]	100.0%

Source: Parties' estimates.

- 17.4 It is only if both types of market segmentation set out at paragraphs 17.2 and 17.2 are applied - ie the segment of the market that relates only to sales of New Zealand origin FBS to research customers is considered - that the Parties' estimated combined share falls outside the Commission's concentration indicators. Even then, the market share aggregation is not greater than [CONFIDENTIAL]:

Figure 6 - Shares of supply of NZ FBS (Research), New Zealand (2012)

	Value	
	(US\$)	(%)
Thermo Fisher	[CONFIDENTIAL]	[CONFIDENTIAL]
Life	[CONFIDENTIAL]	[CONFIDENTIAL]
Combined	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
Others	[CONFIDENTIAL]	[CONFIDENTIAL]
Total	[CONFIDENTIAL]	100.0%

Source: Parties' estimates.

For the reasons set out in section 12 in particular, the Parties do not consider this narrow approach to be an appropriate market definition. Even if it were, the Merger will not give rise to a substantial lessening of competition given the minor level of aggregation and strong competition from existing market participants including Sigma-Aldrich and GE Healthcare.

Acquisition of raw FBB

- 17.5 On the supply side, it is difficult to estimate what proportion of raw FBB is acquired by the Parties in New Zealand, [CONFIDENTIAL]. There are 13 suppliers registered with the Ministry of Primary Industries to produce FBS, [CONFIDENTIAL]. There are also at least 13 international competitors, in addition to the Parties, who sell (or resell) New Zealand-sourced FBS (see figure 2).

18. To what extent do you consider that the merged entity would be constrained in its actions by the conduct of existing competitors in the markets affected?

- 18.1 The Merger will not give rise to a substantial lessening of competition in the factual in the market for the processing/importation of Australian and New Zealand FBS, or any submarket within that market.

Processing/importation and sale of Australian and New Zealand FBS

- 18.2 There will be no material change in the dynamic of competition in the market for the processing/importation and sale of Australian and New Zealand FBS, or New Zealand FBS, in New Zealand. In this market and in sera markets generally, Mergeco will be constrained by a number of existing competitors, none of which face material barriers to expansion.
- 18.3 There are many credible alternative suppliers of FBS including those listed in figure 2, and the ability of customers to switch suppliers will be unaffected by the Merger.
- 18.4 Furthermore, research customers are very price conscious and typically seek quotes from multiple suppliers before submitting an order. Any attempted increase in prices charged post-Merger would see research customers in particular switching to rival suppliers.

Acquisition of raw FBB

- 18.5 On the acquisition side of the market for the processing/importation of Australian and New Zealand FBS, or New Zealand FBS, a bidding market dynamic prevails. The Commission has previously observed that in relation to bidding markets, the key determinant of competition is whether or not the incumbent faces at least one well matched and aggressive challenger.¹² The countervailing market power of suppliers is also a relevant consideration.

More than one rival bidder

- 18.6 Following the Merger, there will be a number of large, well-resourced firms eager to purchase raw FBB for use in the production of New Zealand FBS. These firms include Moregate Biotech, GE Healthcare, and Merck Millipore. [CONFIDENTIAL]
- 18.7 Furthermore, because raw FBB is a byproduct of the meat processing industry, supply is inelastic. In addition, as noted at paragraph 10.5, the total supply of raw FBB available has decreased significantly in recent years and is expected to remain restricted while global demand for New Zealand and Australian FBS (and therefore raw FBB in both countries) remains very strong. With or without the Merger, the Parties expect competition for the supply of raw FBB to remain intense [CONFIDENTIAL].

Countervailing market power of suppliers

- 18.8 Following the Merger, the supply of raw material for FBS production will remain restricted while the demand for it will not be reduced. Accordingly, both before and after the Merger, a considerable degree of market power will be enjoyed by the raw FBB suppliers (see paragraph 10.5).
- 18.9 Furthermore, some raw FBB suppliers are beginning to process raw FBB into raw serum or FBS themselves instead of selling it to firms such as the Parties (see sections 10 and 19). This will have the effect of further limiting the amount of raw FBB accessible by the Parties (and Mergeco following the Merger) and their competitors.

POTENTIAL COMPETITION

Conditions of Entry

19. **Please explain the requirements for new entry and/or importers in the relevant market(s).**

Contract processing of FBS

- 19.1 The availability of contract processing facilities means it is not necessary to establish a processing facility in order to process raw FBB into FBS.
- 19.2 There are a number of firms with processing facilities in New Zealand available for use on a contract basis; MP Biomedicals, Selborne, Moregate Biotech and South Pacific Sera are all known by the Parties to have agreed to carry out processing for other firms. [CONFIDENTIAL].

New processing facility

- 19.3 If a new facility were to be established, the Parties estimate that establishing a facility capable of processing raw FBB into raw serum would require investment of

¹² Decision 569, *Energy Market Services Limited and the Marketplace Company Limited* (20 December 2005).

approximately [CONFIDENTIAL]. The exact cost will depend largely on the number of centrifuge machines to be installed at the facility. Centrifuge machines range in cost from approximately [CONFIDENTIAL] (for a used machine) to [CONFIDENTIAL] (for a new machine). A typical large-scale processing facility is fitted with five to six centrifuge machines and would therefore require an investment of between [CONFIDENTIAL] and [CONFIDENTIAL] in machinery. A freezer, costing approximately [CONFIDENTIAL] would also be required in order to store raw FBB and raw serum, however an alternative to this would be to rent cold storage space from another firm. The Parties estimate that the process of establishing a facility to process raw FBB into raw serum could be completed within 16 weeks with a building available.

- 19.4 To establish a facility capable of processing raw serum into FBS Thermo Fisher estimates that investment of approximately [CONFIDENTIAL] would be required. Components of this cost include setting up a specialised room with an air filter fitted, a holding tank, a filter train (three housings of filters) for processing the serum, and bottling machines and labelling, etc. The investment required for establishing a facility capable of processing raw serum into FBS is additional to the investment set out at paragraph 19.3, however, would-be processors also have the option of purchasing raw serum and processing it into FBS rather than starting with raw FBB.
- 19.5 A processing facility of either or both of the types described in paragraphs 19.3 and 19.4 would require [CONFIDENTIAL] employees with appropriate experience, at a cost of approximately [CONFIDENTIAL] per annum.
- 19.6 For a firm with existing sera processing facilities, conversion of those facilities to process FBS would require no additional investment.

Importation

- 19.7 As the Commission may be aware, there are regulations surrounding the importation of animal products into New Zealand. To import biological products of animal origin, including cell cultures such as FBS, a valid import permit is required. Any importer of FBS must also comply with the Import Health Standard for Cell Cultures from All Countries¹³ and with requirements under the Biosecurity Act 1993 and the Animal Products Act 1999.¹⁴ The United States and Australia are both recognised by New Zealand as free from FMD and therefore bovine products from those countries are not prohibited from being imported into New Zealand.
- 19.8 FBS can be (and is) imported into New Zealand for sale to research and bioproduction customers.¹⁵ Globally, as the supply of United States FBS is far greater than the supply of New Zealand FBS, the Parties expect importation of United States FBS to increase gradually in coming years as the availability of Australian and New Zealand FBS continues to decrease.

Acquisition of raw FBB

- 19.9 [CONFIDENTIAL]. In the Parties' experience, potential purchasers frequently contact suppliers seeking to procure raw FBB, [CONFIDENTIAL].

¹³ Available at <http://www.biosecurity.govt.nz/imports/plants/standards/cellculic.all.htm>.

¹⁴ Some of which are summarised at <http://www.biosecurity.govt.nz/imports/animals/standards/general-animal-bio-products.htm>.

¹⁵ At least one bioproduction customer in New Zealand, [CONFIDENTIAL] has a preference for imported Australian origin FBS, see footnote 7 above.

20. Include a full discussion on any factors that could impede entry; and what might prompt new entry post-merger.

20.1 The conditions of entry are addressed in detail in section 19 above.

20.2 The Parties expect the trends that are currently prompting new entry into this market to continue over the medium term. The existing presence of well-resourced companies such as Moregate Biotech, GE Healthcare and Sigma-Aldrich seeking to obtain any supply available, and the emerging competition from suppliers of raw FBB (described in section 10) will continue to constrain Mergeco after the Merger.

LIKELIHOOD, EXTENT AND TIMELINESS OF ENTRY (THE LET TEST)

21. Please name any likely businesses (including overseas businesses) you are aware of that do not currently supply the market but which you consider could supply each of the relevant market(s). Discuss the likelihood of such entry.

21.1 On the supply side, most large sera suppliers supply both research and bioproduction customers, but there are also some suppliers that focus on meeting the needs of research customers and could choose to export FBS to New Zealand with little difficulty (for example, Gemini, Atlanta Biologicals, 3H Biomedical, Autogen Bioclear, Biosera, Bovogen, Harlan Sera Lab, Kraeber & Co, Labtech, Perbio and Seralab).

21.2 While effective post-Merger competition is not dependent on new entry [CONFIDENTIAL] there are a number of credible paths to new entry into the market for FBS sourced from (and sold in) New Zealand. Entry could be facilitated by customer sponsorship. Some credible categories of new entrants are as follows:

(a) Suppliers of raw FBB could readily commence processing and selling to end customers so as to capture more of the margin available in the overall supply chain. Suppliers are increasingly aware of the ability to increase revenues in this way. Furthermore, MP Biomedicals, Moregate Biotech, and South Pacific Sera offer contract processing which other companies, including suppliers of raw FBB, could make use of.

(b) Other potential entrants include international suppliers of FBS and other types of sera who are not yet present in FBS in New Zealand [CONFIDENTIAL]. These players already have relationships with major bioproduction and research customers and have therefore effectively demonstrated their capability to meet the requirements of bioproduction and research customers, notably in terms of quality and traceability. By entering tenders or agreements for access to raw FBB from suppliers, these companies would quickly be able to add Australian/New Zealand origin FBS to their portfolios.

22. To what extent do you consider that potential entry would be sufficient to constrain the merged entity in the markets affected?

22.1 Constraint from potential entrants is addressed in detail in section 21 above.

23. How long would you expect it to take for entry to occur, and for market supply to increase, in respect of each of the potential entrants named in question 21 above?

23.1 The steps required to begin processing or supplying FBS in New Zealand are addressed in detail in section 19 above.

COUNTERVAILING POWER OF BUYERS

24. To what extent do you consider that the merged entity would be constrained in its actions by the conduct of buyers in the markets affected?

Research customers

24.1 Crown Research Institutes and universities are large, price sensitive customers that exercise significant countervailing market power. Such customers typically have implemented or are currently implementing collective purchasing arrangements.

24.2 The research sector is competitive and is likely to remain so post-Merger for the following key reasons:

- (a) Research customers are very price conscious and price tends to be their primary priority.
- (b) There are a number of competitors in the research sera markets, including Moregate Biotech, Sigma-Aldrich, Merck Millipore, GE Healthcare, Gemini, and Atlanta Biologicals
- (c) Barriers to entry and expansion are even lower than for supply to bioproduction customers as entrants do not need the same scale or quality control as are required to serve bioproduction customers. Therefore, any competitor currently serving the bioproduction market globally with FBS (including US FBS) is a potential supplier to the research market via imports to New Zealand.

Bioproduction customers

24.3 As Thermo Fisher does not currently supply FBS to bioproduction customers in New Zealand, the Parties' businesses do not overlap in this respect. Nevertheless, bioproduction customers in New Zealand are typically subsidiaries of global pharmaceutical companies that purchase FBS in larger volumes than research customers. This gives them a degree of bargaining power, which they have used in recent years to ensure that increases in the price of raw FBB paid by suppliers of FBS have not been passed on in full to them, benefitting in this respect from competition at the level of the FBS producers who have had to absorb at least part of the cost price increases.

24.4 Bioproduction customers typically request quotes from at least three suppliers for any FBS contract. Credible suppliers of FBS to bioproduction customers in New Zealand include all of the firms listed in 24.2(b). Provided they can secure an adequate supply of raw FBB, the barriers to expansion for these existing suppliers are very low.

24.5 Furthermore, while effective post-Merger competition is not dependent on new entry given the number of existing suppliers, there are a number of credible paths to new entry into the market for Australian and New Zealand origin FBS. Such entry could be facilitated by customer sponsorship. In particular, customers keen to sponsor new supply options in the market could work directly with suppliers of raw FBB to bring about relatively radical changes in market composition and structure within a short space of time.

25. **If you consider that there is a constraint from buyers, identify the top five buyers by sales and/or volume (including overseas companies/importers) in the relevant market(s). Where there are significant differences in the size of the buyers please provide details for five medium and five small buyers.**

25.1 [CONFIDENTIAL]

COORDINATED MARKET POWER

26. **Identify and discuss the various characteristics of the market that, post-merger, you consider would either facilitate or impede coordination.**

26.1 The Merger will not make coordination more likely and will not give rise to a substantial lessening of competition on the basis of coordinated effects. Mergeco will continue to be constrained by existing competitors, including GE Healthcare, Sigma-Aldrich, Merck Millipore, Moregate Biotech, and Lonza. Furthermore, there is a real threat of new entry and expansion given that barriers to entry and expansion are low (see section 19 above). Any attempt to collude would be undermined by the likely entry or expansion of competitors and the detection, and reporting by highly price conscious customers and suppliers such as [CONFIDENTIAL] each of whom exercise significant countervailing power.

EFFICIENCIES

27. **If applicable, provide a description of any efficiencies that you believe the acquisition could bring. Would such efficiencies enhance rivalry, or offset the impact of a lessening of competition?**

27.1 Given that the Merger will not substantially lessen competition in any market, an analysis of offsetting efficiencies is not required.

[CONFIDENTIAL]

OTHER FACTORS

28. **Where relevant, provide a description of any other features of the market(s) that should be taken into account in considering the effect of the proposed merger.**

28.1 The highly competitive nature of the life sciences sector globally is confirmed in a number of recent third party reports, including the 2011 BCC Global Life Science Tools Report, the 2012 DeciBio Life Science Research Tools Report and the 2012 SDI Life Sciences Instrumentation Report, all of which note the importance of innovation in the market, the emergence of new technologies and the presence of a large number of competitors across the sector.

28.2 The Parties' product offerings in New Zealand are largely complementary and in areas where their business do overlap, the degree to which they do so is not significant. In this context, the Parties expect that the Merger and the broader range of products that will result from it will allow Mergeco to compete with its global competitors more effectively both in New Zealand and internationally.

PART 6: FURTHER INFORMATION AND SUPPORTING DOCUMENTATION

29. Provide the contact details of relevant competitors, buyers and suppliers and any other relevant market participants in the form of the example table shown below.

Name of Company (both legal and trading names)	Contact details (postal and physical address, telephone, fax and website)	Relevant contact person (name, position, and contact details)
<i>Firms with FBS processing capabilities</i>		
Moregate Biotech	137 Ward Street PO Box 1353 Hamilton Tel: 07 834 0260 Fax: 07 834 0270 http://www.moregatebiotech.com	[CONFIDENTIAL]
GE Healthcare	8 Tangihua Street Auckland 1010 Tel: 0800 434 325 www.gehealthcare.com	[CONFIDENTIAL]
Sigma-Aldrich	PO Box 106-406 Auckland 1030 Tel: +61 2 9841 0555 Fax: +61 2 9841 0500 http://www.sigmaaldrich.com	[CONFIDENTIAL]
Merck Millipore	22 Hobill Avenue Manukau 2104 Tel: 06 356 7328 http://www.merckmillipore.co.nz	[CONFIDENTIAL]
MP Biomedicals	PO Box 1607 Shortland Street Auckland 1140 Tel: 09 912 2460 http://www.mpbio.com	[CONFIDENTIAL]
South Pacific Sera	PO Box 2117 Timaru 7941 Tel: 03 687 4050 Fax: 03 688 7608 http://www.southpacificsera.co.nz	[CONFIDENTIAL]
Proliant Inc.	Proliant World Headquarters 2425 SE Oak Tree Court Ankeny Iowa 50021 United States Tel: +1 515 289 5100 Fax: +1 515 289 4360 http://www.proliantinc.com	[CONFIDENTIAL]
Selborne Biological Services	1064 Pateena Road Longford Tasmania 7301 Australia Tel: +61 (0) 363 911 499 Fax: +61 (0) 363 912 723 http://www.selbornebiological.com	[CONFIDENTIAL]

Southern Cross Biotechnologies	PO Box 58562 Botany Manukau 2163 Auckland Tel : 027 695 7712 Fax : 09 828 7716 http://www.southerncrossbiotech.com	[CONFIDENTIAL]
Maverick Biosciences	1st Floor, 1 Milton Place PO Box 524 Napier 4140 Tel: 06 835 1252 http://www.maverickbio.com	[CONFIDENTIAL]
<i>Suppliers of raw FBB</i>		
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
<i>Purchasers of FBS</i>		
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]
[CONFIDENTIAL]	[CONFIDENTIAL]	[CONFIDENTIAL]

30. **Please provide a copy of the most recent annual report for each of the merger parties. If an annual report is not available, please provide a copy of the audited financial statements of the merger parties (profit and loss account, showing total turnover and profit before tax, and balance sheet). If the merger only relates to a segment of the business of the merger parties, please also provide a copy of any management accounts for the relevant business segment.**
- 30.1 Copies of the most recent annual reports of Thermo Fisher and Life Technologies are **enclosed** as Appendices 4 and 5.

PART 7: CONFIDENTIALITY

31. **If you wish to request confidentiality for specific information contained in or attached to the notice, please state why you consider the information to be confidential and state the reasons for your request in terms of the criteria set out in the Official Information Act 1982.**
- 31.1 Confidentiality is sought in respect of the information in this application that is contained in square brackets. Confidentiality is sought for the purposes of section 9(2)(b) of the Official Information Act 1982 on the grounds that:
- (a) the information is commercially sensitive and valuable information which is confidential to the participants; and
 - (b) disclosure would be likely unreasonably to prejudice the commercial position of the participants, as the parties providing the information.
- 31.2 Thermo Fisher requests that it be notified of any request made to the Commission under the Official Information Act 1982 for release of the confidential information. Thermo Fisher also requests that the Commission seek and consider Thermo Fisher's views as to whether the information remains confidential and commercially sensitive at the time responses to such requests are being considered.
- 31.3 The foregoing equally applies in respect of any additional information provided to the Commission that is expressed to be confidential.

THIS NOTICE is given by Jonathan Wilk of Waltham, Massachusetts, United States on behalf of Thermo Fisher.

I hereby confirm that:

- all information specified by the Commission has been supplied;
- if information has not been supplied, reasons have been included as to why the information has not been supplied;
- all information known to Thermo Fisher which is relevant to the consideration of this application has been supplied; and
- all information supplied by, or on behalf of, Thermo Fisher is correct as at the date of this application/notice.

I undertake to advise the Commission immediately of any material change in circumstances relating to the application/notice.

Dated this 7 November 2013



Jonathan Wilk
Vice President, Deputy General Counsel,
General Counsel, Analytical Technologies Group
Thermo Fisher Scientific Inc

I am a director/officer of Thermo Fisher Scientific Inc and am duly authorised to make this application/notice on behalf of Thermo Fisher Scientific Inc.

CONFIDENTIAL APPENDIX 1

ORGANISATIONAL STRUCTURE - THERMO FISHER AND SUBSIDIARIES

CONFIDENTIAL APPENDIX 2

ORGANISATIONAL STRUCTURE - LIFE TECHNOLOGIES AND SUBSIDIARIES

CONFIDENTIAL APPENDIX 3
AGREEMENT AND PLAN OF MERGER

APPENDIX 4

2012 ANNUAL REPORT - THERMO FISHER

APPENDIX 5

2012 ANNUAL REPORT - LIFE TECHNOLOGIES