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ANI II	Automated Number Identification Information Integers
ANSI-T1	American National Standards Institute Accredited Standards Committee T1
AOCN	Administrative Operating Company Number
APCC	American Public Communications Council
ATIS	Alliance of Telecommunications Industry Solutions
BOC	Bell Operating Companies
BRIDS	Bellcore Rating Input Database System
CPFF	Cost Plus Fixed Fee
CIC	Carrier Identification Codes
CLC	Carrier Liaison Committee
CLEC	Competitive Local Exchange Carrier
CMRS	Commercial Mobile Radio Service
CNA	Canadian Number Administrator
CO	Central Office
COCA	Central Office Code Administration
COCUS	Central Office Code Utilization Survey
CSCN	Canadian Steering Committee on Numbering
CVW	Collaborative Virtual Workspace
DA	Directory Assistance
DSF	Decision Support Facility

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EBITDA	Earnings Before Interest, Taxes, Depreciation and Amortization
ERC	Easily Recognizable Codes
FBI	Federal Bureau of Investigation
FCC	Federal Communications Commission
FFRDC	Federally Funded Research and Development Center
FGB	Feature Group B
FGD	Feature Group D
FTS	Federal Telecommunications Service
FTS2000	Federal Telecommunications System 2000
GAO	General Accounting Office
GFS	Government Financial System
GPC	General Purpose Codes
GSA	General Services Administration
ICCF	Industry Carriers Compatibility Forum
IETF	Internet Engineering Task Force
IL	Information Letter
ILEC	Incumbent Local Exchange Carriers
INC	Industry Numbering Committee
INT/NPA/NXX	International Inbound NXX Codes
IPD	Initial Planning Document

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ITU-T	International Telecommunications Union - Telecommunications
LAN	Local Area Network
LARG	LIDB Access Routing Guide
LASS	LIDB Access Support System
LEC	Local Exchange Carrier
LERG	Local Exchange Routing Guide
LIDB	Line Information Database
MAA	Metropolitan Area Acquisitions
MCAC	Mitretek Code Administration Center
MRS	Message Relay Service
MTCC	Mitretek Computer Center
NANC	North American Numbering Council
NANP	North American Numbering Plan
NANPA	North American Numbering Plan Administrator
NASA	National Aeronautics and Space Administration
NASC	Number Administration Service Center
NCIC 2000	National Crime Information Center 2000
NECA	National Exchange Carrier Association
NIA	Network Interconnection/Architecture Committee
NIIF	Network Interconnection Interoperability Forum

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NNAG	NPA/NXX Activity Guide
NPA	Numbering Plan Area
OBF	Ordering and Billing Forum
OCN	Operating Company Number
OCR	Optical Character Recognition
ODBC	Open Database Connectivity
PBX	Private Branch Exchange
PCS	Personal Communications Service
PSTN	Public Switched Telecommunications Network
RDBS	Routing Data Base System
SAC	Service Access Code
SQL	Structured Query Language
STAWRS	Simplified Tax and Wage Reporting System
T1	Committee T1
TCIF	Telecommunications Industry Forum
TPM	Terminating Point Master
TRA	Traffic Routing Administration
TRS	Telecommunications Relay Service
TSF	Telecommunications Simulation Facility
UIFN	Universal International Freephone Number

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USPS	U.S. Postal Service
VHCD	Vertical and Horizontal Coordinates Data
VSC	Vertical Service Codes
WG	Working Group

Proposal Details

PROPOSAL DETAILS

Mitretek has prepared a detailed response to the NANC Requirements Document. Our Proposal Details provides the information requested in the Compliance Matrix (Attachment 4 to the NANC Requirements Document) and is consistent with the outline contained in the Compliance Matrix.

The Mitretek Proposal Details are organized and numbered exactly like the NANC Requirements Document. *Mitretek complies with all stated requirements.* Additional, detailed information is now presented. ■

General Information

SECTION 1.0

1.0 General Information

1.1 Introduction

Mitretek is pleased to respond to the NANC Requirements Document. We are ready and prepared to assume responsibility of all functions and requirements documented in the Requirements Document. We are prepared and eager to work with the NANC, the 19 participating countries and their appropriate government agencies, and the telecommunications industry to meet important numbering plan needs. Mitretek is prepared and capable of addressing the current and any future requirements as defined by the NANC.

Mitretek's proposal addresses only the Part 1 - NANPA/COCA functions. As we informed the NANC in our letter of 13 November 1996, we believe that to ensure neutrality of the new NANP Administration, there should be no revenue relationships directly with the telecommunications providers. Regardless of the organization selected to serve as the new NANP Administrator, we recommend that a neutral billing and collection agent, independent of the NANP Administration, be selected.

The requested Proposal Details now presents in-depth the Mitretek NANP Administration proposal. Throughout our proposal, we have attempted to specifically address seven reasons why we believe Mitretek is uniquely qualified to be the new NANP Administrator.

These seven reasons are:

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- Mitretek is ready to serve as the new NANP Administration. Our response is fully compliant and takes no exceptions to the NANC Requirements Document.*** In addition to being prepared to meet fully the current requirements, we are also ready, willing, and able to work with and assist the NANC, the FCC, and other appropriate forums to meet the changing numbering plan requirements of the future.

Furthermore, there is nothing in the Mitretek corporate structure or organization that would create problems or prevent our functioning as the new NANP Administrator in the current or a changing telecommunications environment. The new Mitretek NANP Administration is engineered to meet telecommunications industry requirements of the new millennium. We understand the numbering plan requirements in the context of a newly competitive market with emerging technologies. Mitretek's management approach recognizes the importance of the new way the industry and FCC want to control and administer numbering resources. We understand the need for a clear separation between policy, as made by the NANC and regulators, and administration conducted by the new NANP Administration. We will consolidate the NANPA and COCA functions, resulting in improved quality of the NANP and its allocation.
- Mitretek last year met, today meets, and in the future will continue to meet and exceed the neutrality requirements necessary to effectively administer and allocate public NANP resource.*** Neutrality is fundamental to the Mitretek corporate purpose of working in the public interest. Because the corporation is

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uniquely organized, we can ensure the NANC that there are no current, or future, neutrality problems requiring a cure caused by sale of the corporation, relationships with carriers, or incentives of our managers and staff.

3. ***The entire Mitretek organization—Board of Trustees, corporate officers, managers, staff—is dedicated to administering the NANP in a high-quality, responsive manner that meets the needs of industry and serves the public.*** From a corporate perspective, the role of NANP Administration will be an important addition to the neutral-entity, public interest telecommunications work that we are already performing. To ensure the highest level of corporate attention and to ensure that the best resources of the corporation are brought to bear on NANP administration, the Mitretek NANP Administration Director will report directly to a Mitretek corporate officer. From a customer perspective, Mitretek provides a unique customer focused approach. Because we are a not-for-profit, public interest, technology firm, we have no other measures of evaluation for the corporation and employees than the quality of the work performed. This sole focus on the quality of the work performed provides unique incentives to our managers and staff, ensuring high-quality technology and customer-responsive public interest performance. All features of the new Mitretek NANP Administration were designed to benefit the customer, and thereby, meet the needs of the complete telecommunications industry and the public consumers of telecommunications.

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4. *Mitretek brings the appropriate corporate and staff experience required for NANP administration in a changing telecommunications industry and market.*

The FCC was required to address the NANP Administration problems because the current way of administering the NANP was not working - carriers were not providing sufficient data, simple forecast models were not able to adequately predict jeopardy and exhaust in a fast changing environment, numbering plans were out of date in the same year in which it was prepared, code administrators were forced to spend increasing amounts of time dealing with code relief. Experience in the current ways of administering the NANP is not a guarantee, or a sufficient indicator, of success in the future. The successful NANP Administration of the future will require experience beyond that of the NANPA base, including:

- Experience in operating in difficult roles requiring competitively-neutral and technology-neutral attributes
- Experience in managing proprietary data and competitively sensitive information
- Experience in sophisticated statistical data reduction and analysis, with the knowledge and initiative to apply such techniques proactively prior to the onset of problems
- Experience in providing defensible forecasts and sophisticated analytic solutions, again with the knowledge and initiative to apply such techniques proactively prior to the onset of problems

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- Experience in developing and operating the modern computer, database, and communications systems required for such sophisticated data analysis and quantitative analysis
- Experience in considering difficult and complex problems in the framework of the new telecommunications industry
- Experience in appropriate reengineering of mission-critical operations to adapt to changing conditions and requirements

Mitretek has put together the appropriate organization and staff experience and capabilities to meet the NANP administration needs in a fast changing telecommunications environment. Mitretek offers fresh, innovative staff and organization required for implementing the new NANP model. Staffing of the Mitretek NANP Administration will consist of knowledgeable industry professionals and leaders in telecommunications numbering representing all industry segments.

5. ***Mitretek will bring a level of numbering data quality and analytic sophistication appropriate for the North American telecommunications industry and market as it enters the new millennium.*** Like we do in all of our current roles, Mitretek will identify and take the initiative to bring the appropriate level of sophistication when needed, not just when problems develop and when suggested by the customer. Appropriate attention to the front-end challenges does not propagate problems throughout the process.

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- ***Mitretek neutrality is the key to more accurate data and better plans and solutions.*** Since the quality of the numbering plan data is directly related to the data received and the perception of NANP Administration neutrality, Mitretek will work to ensure that all carriers have a fundamental understanding of our corporate ability to handle sensitive strategic and proprietary carrier data.
- ***Mitretek will bring to NANP administration a new level of quantitative and analytic sophistication.*** Our engineers, mathematicians, and scientists will support the NANP and CO code administrators with tools for data reduction and forecasting. Increased analytic sophistication improves the quality of NANP forecasts, hence, the quality of the NANP and its allocation. State-of-the-art information systems and applications will be deployed to provide more accurate reliable forecasting and reporting. Mitretek's unique experience in modeling telecommunications architectures and price structures proves that advanced modeling will result in greater accuracy and realistic granularity in forecasting. Mitretek has significant experience in the mathematical forecasting of telecommunications indicators and requirements for our existing customers.
- ***Mitretek will deploy modern, fully redundant, physically-diverse, client/server-based systems to support all phases of number plan administration.*** We have the experience in the development of such systems for telecommunications modeling and management. Real-time reporting for numbering resources will be provided by the Mitretek NANP Administration.

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6. ***Mitretek provides a logical, incremental transition strategy that will ensure a smooth, error-free, seamless transition.*** Our project management experience gained through the systems engineering, implementation, and operation of large high-technology systems will be brought to bear on the NANPA and COCA transition. Our transition strategy and plan provides for immediate implementation of staff, facilities, systems, and procedures to accept the NANPA functions. One hundred percent of the Mitretek team that will transition the NANPA function in the first 60 days is dedicated and already working in McLean, Virginia. The strategy then provides for the incremental (that is, site by site and also administration functions followed by relief functions) transition of the COCA functions. Mitretek will test and demonstrate operational readiness as the transition proceeds. The transition will be accomplished in less than the required time.

7. ***Mitretek's not-for-profit structure and cost-efficient operation provide a fair and reasonable price.*** Mitretek pricing strategy for the NANP Administration is to recover cost and a small fee, which supports our public interest, scientific research purpose. In addition to providing a firm fixed proposal as required, we are prepared to submit a cost plus fixed fee (CFPP) proposal. The purpose of this CPFF proposal, which is our typical way of providing our services, would to show that our price can be further reduced if risk is agreed to be shared by the NANC. ■

Neutrality

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1.2 Neutrality

Mitretek currently and fully complies with the neutrality requirements contained in Section 1.2 Neutrality of the NANC Requirements Document. Mitretek has not submitted a cure plan, because we currently comply fully with the neutrality requirements and no cure plan is required. Per the Telecommunications Act of 1996 (Section 251(e)(1)), Mitretek, if recommended by the NANC and selected by the FCC, will serve as an impartial entity, administering telecommunications numbering and making such numbers available on an equitable basis. Per FCC Docket No. 92-237, Mitretek will be a non-governmental entity that is not aligned with any particular telecommunications industry segment.

Mitretek currently complies with the Neutrality Criteria, as defined in the NANC Requirements Document. Specifically:

1. Mitretek is not now, nor at anytime in the past has been, an affiliate of any telecommunications service provider(s) as defined in the Telecommunications Act of 1996;
 2. Mitretek has not at anytime issued any of its debt to any telecommunications service provider. Mitretek, and its subsidiaries, has not at anytime derived any of its revenues from any telecommunications service provider; and
 3. Mitretek is not now, nor in the past have been, subject to any undue influence by any party with a vested interest in the outcome of numbering administration and activities.
- Mitretek welcomes any NANC evaluation to determine whether Mitretek meets the

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undue influence, or any other neutrality, conflict of interest, or impartiality criterion.

Mitretek is prepared to provide to the NANC and/or the FCC any additional information for the purposes of applying the Neutrality Criteria in Section 1.2 of the NANC Requirements Document.

Mitretek, and its subsidiaries, have no affiliations or associations with any telecommunications service provider. A complete disclosure of our clients (that is, the source of our revenues) is provided in Appendix A. The banks providing debt financing are enumerated in the financial statements attached in Appendix B. ■

1.2.1 The Importance of Neutrality

During the deliberations and preparation of the Requirements Document, the NANC spent considerable time and effort defining the specific neutrality requirements. Previously, the FCC invited public comments on neutrality in its Notice of Proposed Rulemaking.

Neutrality related comments were received from current CO code administrators, as well as others in the telecommunications industry. The Commission further addressed neutrality when it issued its Report and Order. Underlying the neutrality considerations of the NANC and FCC, is the public law enacted by the Congress, as well as the discussion of perceived discrimination in the August 1993 letter stating the desire of Bellcore and its owners to relinquish the numbering plan administration functions.

Prior to and since corresponding to the FCC and NANC our willingness to serve as the new NANP Administration, Mitretek has continued to study the underlying reasons for and importance of NANP Administration neutrality. We offered to the NANC a white paper (see Appendix F, Mitretek Correspondence to FCC and NANC), prepared after careful study of Congressional, FCC, and NANC requirements for neutrality in the new NANP Administration. These neutrality requirements, as stated in the Telecommunications Act of 1996, are presented in Figure 1-1.

Section 251 of the Telecommunications Act of 1996
(e) NUMBERING ADMINISTRATION-
(1) COMMISSION AUTHORITY AND JURISDICTION

The Commission shall create or designate one or more impartial entities to administer telecommunications numbering and to make such numbers available on an equitable basis. The Commission shall have exclusive jurisdiction over those portions of the North American Numbering Plan that pertain to the United States. Nothing in this paragraph shall preclude the Commission from delegating to State commissions or other entities all or any portion of such jurisdiction.

Figure 1-1. Summary of Neutrality Requirements as Stated in Public Law

The most exhaustive examination by the FCC of the question of neutrality can be found in its Report and Order 95-283. Salient quotes from this important document can be found in Figure 1-2.

We believe that there are two fundamental ways in which a neutral NANP Administration will improve the effectiveness and efficiency of numbering plan administration:

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Cite From Report and Order in the Matter of Administration of the North American Numbering Plan (FCC 95-283)	At Paragraph
The new NANP Administrator shall "not be aligned with any particular telecommunications industry segment."	2
The new NANP Administrator shall be "a single, non-government entity that is not closely identified with any particular industry segment."	18
"Administration of the NANP should not unduly favor or disadvantage any particular industry segment or group of consumers."	15
"Administration of the NANP should not unduly favor one technology over another. The NANP should be largely technology neutral."	15
The new NANP Administrator should "be a neutral third party that is not aligned with a particular industry segment."	55
The NANP Administrator must be fair and impartial.	57
The new NANP Administrator shall avoid "the perception and accusation that it was not" impartial.	57
Administration of the plan must seek to facilitate entry into the communications marketplace by making numbering resources available on an efficient, timely basis to communications services providers.	15
All segments of industry must "have equal, non-discriminatory access to CO codes."	73
The new NANP Administrator must ensure that "numbering administration [is] non-discriminatory, pro-competitive and encourage[s] the introduction of new technologies."	73
These numbers are a public resource, and are not the property of the carriers.	4
For several years, the existing structure for administration of the NANP was effective...changes in the structure of the telecommunications market make it appropriate to shift administrative responsibilities for all domestic numbering matters to a neutral entity. Increasingly, companies needing numbering resources, such as PCS providers, are competitors for market share of the carriers that directly and indirectly controlled distribution of numbering resources.	14
Parties contend that access to number resources is critical and that increased telecommunications competition demands changes to the current structure that is dominated by the local exchange carriers.	17
Changes in the telecommunications industry lead us to reexamine existing numbering resource administration	1
The plan historically has been developed and administrated by the wireline telephone industry, but increasing competition from new entrants into the telecommunications market have made continuation of that form of administration untenable.	3
In reaching this conclusion, we do not mean to suggest that Bellcore as the current administrator has not been fair or impartial. Bellcore's request to relinquish its responsibilities as administer made examination of this issue unnecessary.	57
Eliminating the potential for discriminatory treatment that exists under the current system is a major purpose behind the decision to adopt the new model for administering numbering resources.	114

Figure 1-2. Summary of FCC Neutrality Quotes

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Cite From Report and Order in the Matter of Administration of the North American Numbering Plan (FCC 95-283)	At Paragraph
Telaccess notes that...without changes [to the current numbering plan administration model] the Commission will see discriminatory conduct repeat itself in the future, endangering Commission goals of promoting new services and economic growth.	18
APCC states that its members are concerned that bias in number assignment practices may prevent them from being treated fairly in the assignment of numbers.	18
McCaw adds that control of NANP administration by Bellcore and the Bell Operating Companies (BOCs) has raised serious competitive issues and given short shrift to the needs and concerns of wireless service providers.	18
Additionally, BellSouth observes that the perception that Bellcore's affiliation with the regional Bell Operating Companies prevented it from performing its functions in an impartial manner impeded Bellcore's performance of its NANP Administrator responsibilities.	18

Figure 1-2 (Concluded)

1. Improved quality of the data received from industry to a fundamentally better NANP
2. Reduced risk to the NANC and FCC due to disputes and litigation

It is clear that high quality number plan administration requires high quality data as input. However, it is equally clear that the data required from the telecommunications carriers bears the most proprietary information and strategic thinking of these companies. Such information is given to external organizations with the greatest of care and scrutiny, as misuse of this information can have significant negative competitive consequences. The importance of these data is only heightened when operating in an increasing competitive, dynamic marketplace of decreasing margins. When there exists a real or perceived conflict of interest or potential for bias, the company will not provide the necessary amount or quality of data to the numbering plan administrator.

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High quality data, when combined with other information and the appropriate level of sophisticated forecasting and allocation tools, can lead to an accurate forecast and a high quality numbering plan. Of course, an accurate forecast and a high quality numbering plan lead to a minimum number of disputes and downstream problems. Unfortunately, low quality data from the carriers leads to inaccurate forecasts and low quality numbering plans regardless of the sophistication of the applied forecasting and allocation tools. Low quality data, resulting from a real or perceived lack of neutrality in the Administrator, negatively impacts *all* of the downstream NANP activities. Time to code exhaust decreases, number of jeopardy situations increases, relief planning activities increase, number of disputes and litigations increases, carriers are motivated to hoard numbers.

Hence, high quality of data from the carriers is imperative to the effective and efficient administration of the NANP. Neutrality, as perceived from the carrier community, is the single most important factor in whether or not the NANP Administration gets the highest quality data available from the carrier.

Experience shows that the forecasting and allocation of numbering resources cannot be performed with complete certainty. Forecasts are based on the best available data. As a result, there will always be relief activities and the possibility of disputes. In an environment of a real or perceived lack of neutrality in the NANP Administration, companies who believe that they have been wronged quickly move to the disputes process

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and to litigation. In the new model of NANP Administration, an increased number of lack-of-neutrality disputes and litigations could not only directly occupy NANC members and FCC staff, but will also result in decreased attention to setting policy and dealing with other upstream activities. However, in an environment where industry believes the NANP Administration is neutral, and such neutrality is constant and demonstrable, industry is more likely to continue to work inside of the relief planning framework, and not invoke disputes and litigation.

The importance of neutrality is significant—neutrality results in improved data affecting all the NANP Administration activities—neutrality keeps industry in the NANP Administration framework, not before the NANC, the FCC, or the courts. ■

1.2.2 Mitretek Neutrality

The Mitretek NANP Administration will provide the NANC, FCC, telecommunications industry, and public with a single, non-government, neutral entity, not aligned with any particular telecommunications industry segment. It is important to understand that not only does Mitretek comply with these neutrality requirements, but we are bound by our corporate articles of incorporation (that is, our corporate charter) and existing public interest contractual relationships to continue to meet these neutrality requirements. The Mitretek corporate characteristics are ingrained in our corporate culture and operations. Our managers and staff understand these characteristics and the corporation's operating

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practices, procedures, and policies have been established accordingly. Specifically, we have the following corporate characteristics:

- ***We are incorporated in the State of Delaware, as a private-sector (that is, non-government), not-for-profit corporation.***
- ***There are no private ownership rights in Mitretek Systems, Incorporated, and there is no stock.*** No part of Mitretek is owned by any segment or corporation in the telecommunications industry; nor in the future can any segment or corporation in the telecommunications industry own any part of Mitretek. Any debt financing for operational, or any other purpose, is provided by commercial banks. No part of Mitretek's assets may inure to the benefit of private shareholders or individuals.
- ***Mitretek works exclusively in the public interest.*** As shown in Appendix A, we receive no revenues from any segment or corporation in the telecommunications industry. We have no contractual relationships, affiliations, or associations with any segment or corporation in the telecommunications industry. Ensuring that we continue to work in the public interest is the primary function of the Mitretek Board of Trustees. The Mitretek trustees are not making corporate-related decisions based on monetary gain for themselves, owners, or stockholders. As a result, the Mitretek trustees are focused primarily on the corporation's continued working in the public interest, as well as substantive performance in areas such as, maintaining neutrality and conflict-free positions, technical quality and innovation, and responsiveness to client needs.

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- *Mitretek does not manufacture hardware or software.* Mitretek builds many experimental models as a proof-of-concept stage in systems development programs; however, we do not manufacture hardware or software. Specifically, we provide no telecommunications services, hardware, or software. As a result, we do not benefit from any specific selection of technology—Mitretek is technology-neutral. Since we do not engage in commercial activity, other private sector, for-profit firms are willing to provide us access to proprietary technical, strategic, and financial data. They do so in the full knowledge that we will not use such information in competitive situations. By refraining from commercial activity, we maintain objectivity, allowing us to serve as an impartial, neutral link between and among our clients and competitive industry.

The Mitretek NANP Administration will operate with these corporate characteristics. ■

Term of Administration

SECTION 1.3

1.3 Term of Administration

Mitretek, upon recommendation by the NANC and selection by the FCC, is prepared to serve as the new NANP Administration for an initial period of five (5) years. As the new NANP Administration, Mitretek will accept responsibility for providing NANPA and COCA functions. Mitretek understands that at any time prior to the termination of the initial or subsequent term of administration, the term of administration may be renewed up to five (5) years in length with the approval of the appropriate regulatory authorities and Mitretek. ■

Valid Period For Respondent Proposal

SECTION 1.4

1.4 Valid Period for Respondent Proposal

The Mitretek proposal is valid for a period of twelve (12) months from the Closing Date For Respondent Proposals specified in Section 1.10 Schedule of the NANC Requirements Document. Mitretek understands that the current closing date for respondent proposals is 3 April 1997. Therefore, the Mitretek proposal is valid through 4 April 1998. ■