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ADMINISTERING RESEARCH CONTRACTS

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INTRODUCTION

This publication delves into many of the issues associated with the administration of research contracts. It looks at how contracts differ from grants, from both federal and legal perspectives. It covers the structure of the primary regulation governing federal contracts, the Federal Acquisition Regulation, and how it can be used to a research administrator's advantage when negotiating federal contracts. It looks at some of the special challenges that can arise when, for example, an office of sponsored programs (OSP) is negotiating contracts with government agencies and with the private sector, including subcontracts of federal funds via the private sector. Lastly it discusses in general terms resources required by an institution that accepts federal contracts.

WHAT IS A 'CONTRACT'?

It is important to define the key terms used in a discussion of research contracts administration. The word "contract," as with many terms in research administration, can have different meanings in different contexts. *Legally a contract is an agreement between two or more persons or entities that creates a legal obligation between them to do something, or to not do something. Further, to be considered binding, a contract must have the following essential characteristics*:

- The parties to the contract must be competent to enter into the agreement.
- The subject matter of the contract must be explicitly stated.
- There must be consideration (something of value) given to the party making the promise(s) by the party receiving the promise(s).
- There must be mutuality of agreement (in other words, both parties must agree on all of the terms).
- There must be mutuality of obligation (i.e., both parties must be obligated by the contract).

According to the criteria above, grants are legally contracts. In fact the institution could label the agreement a "gift," a "memorandum of understanding," or anything else, for that matter, but *if it meets the legal definition of a contract, it's a contract*.

On the other hand, the federal government makes a clear distinction between grants and cooperative agreements — which are collectively known as "financial assistance awards"[1] — and contracts, which are "procurement awards." The primary difference here is that financial assistance awards are intended to transfer something of value to the recipient to carry out a public purpose of "support or stimulation" as authorized by U.S. law. Student aid, research grants, and U.S. Department of Education block grants to states are examples of federal financial assistance.

The federal government *uses contracts for the purpose of acquiring goods and services for the direct benefit of or use by the U.S. government*. In other words, the government has decided what it needs, and then looks for an entity that can provide that service or commodity for the best price. *For purposes of this publication, the term "contract" refers to federal procurement awards and to awards issued by the private sector.*

Other terms often encountered when discussing contracts, compared side-by-side with their financial assistance counterparts, are included as Figure 1.

Figure 1. Key Terms Used in Procurement vs. Financial Assistance Awards

Procurement	Financial Assistance
Solicitation Request for Proposals (RFP) Request for Quotes (RFQ)	Program Announcement Proposal Guidelines Call for Proposals Broad Agency Announcement
Proposal Bid Offer	Proposal Application
Cost Proposal	Budget
Statement of Work (SOW) Technical Proposal	Project Description
Subcontract	Subaward
Contract Contract Award	Grant or Cooperative Agreement Financial Assistance Award
Representations and Certifications	Certifications
Federal Acquisition Regulation (https://www.acquisition.gov/far/) Uniform Guidance (2 CFR 200)	Uniform Guidance (2 CFR 200)

[1] *The distinction is so clear as to have been codified in federal statute: Federal Grant and Cooperative Agreement Act (31 USC. 6304 and 6305). The act is available online at http://uscode.house.gov/*

STAFFING AND COMMUNICATIONS

There is no specific organizational model that is better or worse for the administration of contract awards. Proposals that result in contract awards have the same basic characteristics as proposals that result in grant awards: a budget, a statement of work or project description, terms and conditions, etc. Therefore, it logically follows that the simplest way of handling contract awards organizationally is to use the same method as is used for grant awards.

As with many other aspects of research administration, the volume of activity in a particular area is the single most important factor in determining staffing needs. Wherever in the institution contract awards are to be reviewed and negotiated, however, that office must have available to it someone familiar with the Federal Acquisition Regulation and with the special issues that make contract awards different from grant awards. In addition if the OSP is entering into contracts with the private sector, then it will need access to expertise in intellectual property issues (including the Bayh-Dole Act and the institution's intellectual property policies, licensing activity, and patent portfolio).

Effective Communications

Communication is especially important when administering contract awards. This is primarily because most institutions receive so few contract awards, when compared with grant awards, that institutional personnel responsible for the management of awards are often unaware of the unique requirements of contract awards administration.

There are two highly important elements to communications about the contract:

- Those who sign off on contract proposals (if different from those who negotiate contract awards) should understand that their *signatures may also represent acceptance at the time of proposal submission of any terms and conditions that are included in the contract solicitation.*
- After execution of the award, *it is vital that the contract's requirements be communicated clearly and in detail to those responsible for the administration of a contract award.*

Both of these issues are addressed in more detail below.

Resources Required

The single most important resource that an institution needs with regard to administering research contracts is actually two-fold: (1) access to a copy of the Federal Acquisition Regulation (FAR), and (2) at least one person who is familiar with its use.[2] (Details on the structure of the FAR are discussed later in this document.)

[2] *All financial assistance regulations are codified at Title 2 of the Code of Federal Regulations (CFR). The FAR is codified at Title 48 of the CFR. The CFR is available online at http://www.ecfr.gov Note that effective December 26, 2014, the regulations that apply to financial assistance awards change from the OMB Circulars to the Uniform Guidance (2 CFR 200), as described in the Uniform Guidance; the cost principle, audit and subrecipient monitoring portions of the Uniform Guidance will apply to contract awards issued on or after 12/26/2014.*

CONTRACTS AT THE PROPOSAL STAGE

As previously discussed, contract awards are just another type of award that an institution receives. The regulations governing contracts, however, are different in many respects from those that govern grants, and this is where an institution can encounter difficulty — in situations where it doesn't account for these differences in its administration of contract awards.

Experienced individuals on the pre-award side of research administration are familiar with various agency proposal guidelines for those sponsors to which they submit the most proposals. And, they are accustomed to solicited proposals, where a sponsor has requested applications for a specific program, with a specific deadline, and usually with specific formatting instructions. Further they are familiar with unsolicited proposals, where a sponsor has made it known that it is accepting applications in a general area of interest, but there is usually no deadline, and there may or may not be specific formatting instructions.

Most contracts are the result of solicited proposals, where the solicitation includes a statement of work written by the sponsor and very specific instructions as to how the proposal should be prepared and submitted. Contract solicitations often include a proposed set of terms and conditions that the sponsor intends to use if the institution is selected for an award.

While there may not appear to be much difference conceptually between a grant solicitation and a contract solicitation, there is one practical difference: *if the contract solicitation includes proposed terms and conditions, it is almost a certainty that the institution must include with the proposal submission any objections it has to those terms and conditions.* In other words, when responding to a contract solicitation, contract negotiations begin at the time the institution submits a proposal.

In most cases, the expectation by the sponsor to begin negotiation at the point of proposal submission is explicitly stated in the solicitation. However, in the last-minute rush to get a proposal signed and out the door, this expectation may escape the notice of someone not experienced with contracts. Or the individual may consider the inclusion of proposed award terms in the solicitation as an "FYI" by the sponsor and expect that the post-award people will take care of negotiation, as would normally be the case with a grant.

This is a very basic — but often misunderstood — distinction between grants and contracts. In an institutional model where proposal responsibilities rest with different individuals or offices than do award management responsibilities, communication is vital. Without good communication, an OSP could very easily find itself in a situation where the individual who submitted a contract proposal has unknowingly accepted the contract terms — all with that one signature.

For example, the government tends to use one form, the SF 33 "Solicitation, Offer, and Award" to act as the cover page of the solicitation, the offer (or proposal), and of the contract award.[3] For purposes of the solicitation, the SF 33 identifies which government agency/contracting activity has issued the solicitation; it includes a listing or table of contents of the entire solicitation, including the proposed award terms; and it states the submission deadline, if any.

For purposes of the offer, the SF 33 acts as the cover page, with a place for the proposer to add its identifying/contact information and its signature. Note that signature by the proposer on the SF 33 constitutes acceptance of the entire contents of the solicitation, including any proposed terms and conditions, *unless exceptions are submitted with the offer.* Finally for purposes of the award, the SF 33 acts as the contract cover page, including a place for the federal contract officer to sign. Therefore, if the proposer signs and submits the SF 33 without including any exceptions to the proposed terms and conditions, all that's necessary to fully execute the contract is for the contract officer to countersign the SF 33. If this occurs, the institution is under contract and required to perform under whatever terms were included in the solicitation.

[3] *The SF 33 can be found on the Web at http://www.gsa.gov/portal/forms/download/116254*

Exceptions to Contract Terms

Submitting *exceptions to proposed contract terms* along with a contract proposal is part of the normal contracting process. Note that mutual agreement (between parties to the contract) is not necessary at this point, merely the submission of the exceptions (if any). This is usually just the beginning of the negotiation. While it may take several weeks or even months before an institution hears back from the federal contract officer, when it does, it usually will be to discuss the exceptions noted and may include requests for clarification or additional information about the proposal.

Ideally when an institution presents exceptions, it should do so in the greatest detail possible; it should not simply state that some term or condition is "unacceptable." An institution should state why something is unacceptable and, if appropriate, provide an alternative to the requirement that is acceptable. (An in-depth discussion of contract negotiation and the FAR is included later.)

There can be situations where there is simply *no time to prepare a detailed list of exceptions* in light of the proposal's deadline. In these situations, there are options available, but the less detail provided about the exception, the more risk the institution takes that the sponsor will consider it unresponsive to the solicitation. If a sponsor finds an institution unresponsive, it is highly likely that the proposal will be returned without further review.

Following are various ways to address undesirable terms and conditions, if time does not permit provision of a detailed listing:

1. Include a statement in the cover letter to the contract indicating that there was insufficient time to review the terms and conditions, and that the institution reserves the right to comment on them at a later date. This is the least desirable option because the federal contract officer may simply ignore the "reservation" and treat the proposal as nonresponsive. If at all possible, contact the contract officer before deciding on this option to see if he or she will be receptive to this approach.
2. Include a general statement about the types of terms and conditions that are problematic for the institution (such as publication restrictions, export controls, and restrictions on foreign nationals). While not optimal, this approach at least puts the contract officer on notice about what the institution's issues are.
3. Go through the proposed terms and conditions, identifying the most problematic ones, then address those in detail. Many problematic contract terms are merely undesirable, rather than absolutely unacceptable. In other words, if the institution doesn't have sufficient time to comment on all of the terms and conditions that may be problematic, it should at least comment on the ones that it absolutely cannot accept. Keep in mind, though, that the contract officer may not be willing to enter into negotiation later regarding those clauses to which the institution did not initially take exception.

These alternative methods of raising exceptions to the proposed terms and conditions have been successful when the institution has had limited time to submit a contract proposal. They are not guaranteed to work in all situations, however, since incorporating them into a solicitation response could be seen as rendering it "not fully responsive to the solicitation."

Representations and Certifications

There are other differences between grant proposals and contract proposals. For example, if federally funded, a contract solicitation will require the institution to sign and submit a set of "representations and certifications." This is a multipage document that spells out in great detail all of the federal compliance requirements to which the proposal and/or any resulting contract will be subject. It will include the usual certifications with which an institution likely is already familiar from grant proposals, such as drug-free workplace, lobbying, and debarment/suspension. It also will include several others that are specific to federal procurement actions, such as small/large business declaration, organizational conflicts of interest, and compliance with the Cost Accounting Standards.[4] This document will most likely be part of the solicitation package that the institution must submit, and it will be incorporated by reference into any resulting contract.

While reps and certs have traditionally been submitted for each federal contract proposal, entities that do business with the government are now expected to maintain a set of reps and certs as part of their entity record within the System for Award Management (www.sam.gov).

Subcontracting Plan

If the contract proposal exceeds $700,000, the institution may be required to submit a "subcontracting plan." In federal procurement transactions, there are certain minimum requirements regarding the inclusion of minority and disadvantaged businesses that the government imposes on itself and on all those to whom it issues contracts. A subcontracting plan is the proposed plan of action that a federal contractor will take as it procures goods and services to ensure that it is attempting to include a minimum number of minority and/or disadvantaged businesses as vendors.

Preparation of a subcontracting plan requires access to a copy of the proposal budget and to someone who can answer questions about the budget. It also requires a detailed knowledge of the vendors normally used by the institution for acquiring goods and services. Most institutions that do a lot of business with the federal government are familiar with this requirement and will have an identified individual or office that is responsible for preparation of and reporting on subcontracting plans. If this is not the case, the institution will need to identify someone who can perform this function. The government takes the subcontracting plan very seriously — once accepted

- it will be incorporated into the contract by reference;
- the institution will be required to report quarterly on its progress towards achieving the goals stated in the plan; and
- failure to demonstrate a good-faith effort to achieve the subcontracting plan goals will constitute a material breach of the contract and could lead to termination by the government.

The subcontracting plan may or may not be required at the proposal stage, but should not be submitted unless the institution is specifically directed to do so, either by the solicitation, or later, by the contract officer.

One last note about submitting a proposal in response to a contract solicitation. It is very important that the institution *follow all of the instructions specified in the solicitation*. If for some reason the institution finds itself unable to do so, then explicitly state in the cover letter what is missing or what is different, and why an instruction was not followed completely; do not simply ignore a requirement. Technically any deviation from the solicitation requirements could be grounds for the sponsor not to review the proposal. However by addressing each such instance, the institution is at least demonstrating to the sponsor that it reviewed and considered each requirement, and that it is attempting to be as responsive to the requirements as possible. This rule-of-thumb applies to both federal and nonfederal submissions.

[4] *The Cost Accounting Standards (CAS) were established by the Cost Accounting Standards Board (CASB) for colleges and universities in 1994. Under CAS universities receiving federal awards totaling $50,000,000 or more must complete a lengthy and detailed Cost Accounting Standards disclosure statement (DS-2).*

CONTRACTS AND THE FEDERAL ACQUISITION REGULATION

No discussion of contracts would be complete without a look at the Federal Acquisition Regulation (FAR). All government procurement actions are subject to the FAR to some extent. Therefore if a research administrator is administering government contracts or subcontracts under government contracts, he or she will need to be at least familiar with the way in which the FAR works.

The FAR represents the policy and procedure manual for federal contract officers on how to construct a contract; it is written by federal employees for federal employees. Understanding how to look things up in the FAR, and the relationships between the prescriptions and clauses (discussed below), will allow one to determine whether the contracting officer constructed the contract properly for a given situation.

Many people have an aversion to the FAR and would prefer never to have to deal with it. This is often due to a lack of familiarity with the regulation. For most research administrators, contracts represent the minority of federal awards they handle. This section, therefore, provides enough of an overview of how the FAR works so that research administrators should find it less daunting. Of course, as with any set of terms and conditions, once one knows how to look things up, it is still necessary to read and understand the individual requirements.

Structure of the FAR

The FAR is divided into several chapters. Chapter 1 is commonly known as the "FAR" or "basic FAR," and Chapters 2 and higher are the federal agency "supplements" to the basic FAR. There is one chapter for each executive agency. To clarify, when the FAR was originally issued in 1984, the intent was for the majority of federal contract requirements — those that applied to all federal agencies — to be included in Chapter 1. Then, in those situations where a federal agency needed to include a requirement specific to that agency, it could issue that requirement within its respective FAR supplement (or chapter), without the need to clutter up the basic FAR with agency-specific requirements. Those who have experience with the Research Terms and Conditions[5] likely will already be familiar with this concept.

In any FAR-governed contract, one would normally find clauses from no more than two chapters — appropriate clauses from Chapter 1 (since Chapter 1 addresses all of the basic federal procurement requirements), and those from whichever other chapter specifically applies to the executive agency issuing the contract. An exception to this rule is where a branch of the military is issuing the contract. In this case, the institution would have the expected clauses from Chapter 1 (basic FAR), Chapter 2 (U.S. Department of Defense) and possibly clauses from one of three chapters: 51 (Army), 52 (Navy), or 53 (Air Force).

Each chapter of the FAR is divided into "parts," with each part addressing a particular procurement topic (termination, intellectual property, inspection, property management, etc.). The titles of each part are consistent across all chapters. For example, Part 27 of Chapter 1 (basic FAR) addresses intellectual property issues, as does Part 27 of Chapter 2 (DoD supplement). The difference is that the former reflects intellectual property issues applicable across all federal agencies, while the latter reflects those additional intellectual property requirements that apply only to the Department of Defense. Figure 2 is a table that will make this structure more clear, using a very small sample of existing chapters and parts.

[5] *The Research Terms and Conditions (RTC) are an implementation of federal financial assistance requirement for federal research awards. They are located on the web at https://www.nsf.gov/awards/managing/rtc.jsp*

Figure 2. Snapshot of the FAR Structure			
	Part 27	**Part 45**	**Part 49**
Chapter 1: Basic FAR	Governmentwide Intellectual Property	Government wide Property Management	Governmentwide Termination
Chapter 2: Department of Defense	DoD-specific Intellectual Property	DoD-specific Property Management	DoD-specific Termination
Chapter 3: Health & Human Services	HHS-specific Intellectual Property	HHS-specific Property Management	HHS-specific Termination
Chapter 9: Department of Energy	DOE-specific Intellectual Property	DOE-specific Property Management	DOE-specific Termination

When looking at any chapter of the FAR, it is easy to group parts into two basic categories: the *prescriptions* (Parts 1-51), and the *provisions and clauses*[6] (Part 52). Part 52 is where one finds the full text of all of the clauses referenced in a contract or solicitation; Parts 1-51 include the discussion and instructions as to when particular clauses are to be used.

In putting together a federal contract, the contract officer would start with Part 1 and work his or her way through to Part 51, reading the prescriptions (instructions) as to which clauses from Part 52 should be included in the contract given certain variables, such as purpose of the contract (R&D, supply, service, construction, etc.); nature of the contractor (for-profit, nonprofit, educational, state, etc.); and finance type (fixed-price, cost-reimbursement, etc.). All of these variables, and several more, are discussed within Parts 1-51, which then provide, for example, specific instructions as to which termination clause or which intellectual property clause, etc., from Part 52 should be inserted into the contract.

In reviewing the contract, one attempts to "reverse-engineer" this process by identifying the FAR clause(s) referenced in the solicitation or contract document one is reviewing and looking up their full text in Part 52 of the appropriate chapters (or agency supplements). If one finds any of the clauses to be unacceptable or problematic, the next step would be to backtrack from each such clause to its instruction or "prescription" somewhere within Parts 1-51. If, after reading the prescription, it turns out that the clause was incorrectly included in the contract, then one could use that very prescription as the argument to the contract officer to have the clause removed or to request a more appropriate version of the clause.

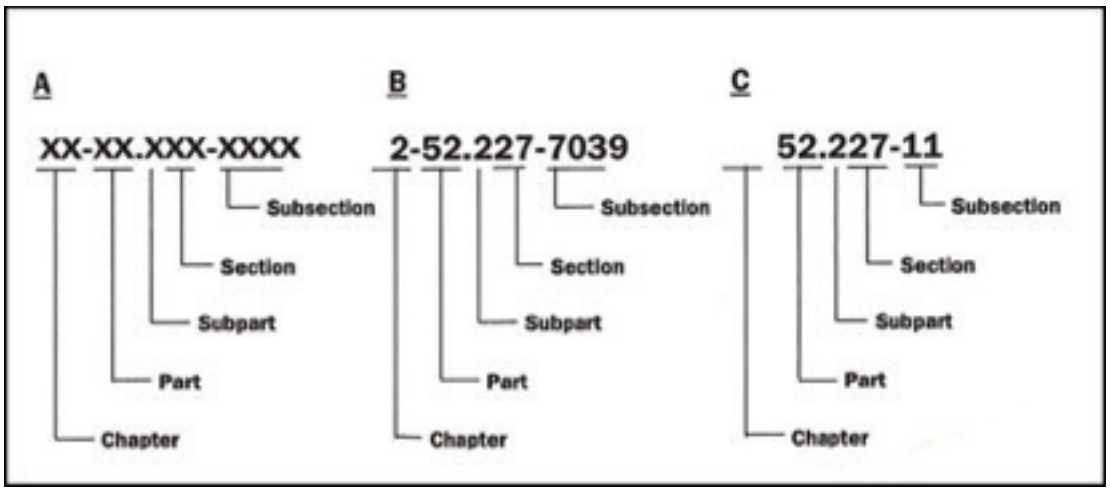
It might seem to be a daunting task to find the correct prescription for a particular clause. However, the designers of the FAR anticipated this by including at the beginning of every FAR clause a specific cross-reference to the originating prescription.

[6] *These terms are often used interchangeably, but correct usage is as follows: a "provision" is a FAR requirement that applies to a proposal or offer, and a "clause" is a FAR requirement that applies to a contract. For practical purposes, this distinction is irrelevant, and the term "clause" will be used throughout.*

FAR Numbering System

The numbering system for the FAR reflects its organizational structure. Any clause contained in the contract can be identified directly back to the FAR chapter and part from whence it came. FAR clauses are numbered in the format outlined in Figure 3.

Figure 3. FAR Caluse Numbering Structure



Example A in Figure 3 displays all of the possible placeholders. Example B contains a Department of Defense clause (Chapter 2). Example C shows a Basic FAR clause (Chapter 1). Note the absence of a chapter designator for the Chapter 1 clause — this is an idiosyncrasy in how the numbering system is used — the chapter designator is rarely if ever used with clauses from Chapter 1.

Sometimes the chapter number is written without the hyphen (e.g., 252.227-7039). This does not mean Part 252. Since there are only two possible placeholders to designate the part, and these are always the two placeholders to the left of the decimal point, once one has reached the third placeholder to the left of the decimal point, one is looking at the chapter number. Therefore this example refers to Chapter 2, Part 52.

Again, looking at Example C, note that it includes a reference to Subsection 11. This is a reference to the 11th clause, sequentially, in Section 27. Example B references subsection 7039. Contrary to what one might conclude based on what was just described, this is not the 7039th clause in Section 27. Rather it's the 39th clause. Many of the agency FAR supplements (that is, Chapter 2 and above) add two digits in front of the subsection number, or utilize some other numbering technique to make it more obvious that a particular FAR clause is not from Chapter 1.

Looking Up FAR Clauses

In the contract, a FAR clause will take the following form:

Clause Number	Clause Title	Clause Date
252.227-7039	Patents Reporting of Subject Inventions	April 1990

These three pieces of information must be indicated in the contract for each FAR clause incorporated, in order for it to be a valid reference. All three are important in looking up the FAR clause as

- the *clause number* gives the institution all of the information necessary to find the clause;
- the *clause title* corroborates the number (they should both be the same in the contract and when the institution looks them up in the FAR); and
- the *clause date* lets the institution know that it is looking at the correct version of that clause.

It is important to note that the FAR is constantly being updated; each clause is subject to modification as federal laws and policy requirements change. When a contract is constructed, the version of the clause incorporated into the contract at the contract's date of execution is the version of the clause that applies throughout the life of the contract, unless the contract is subsequently updated by formal modification and specific clauses are updated. It is important to note, therefore, for each FAR clause included in the contract, which version it is so that the version that applies to the contract can be located if necessary at some later date, such as during a dispute with the sponsor over the contractor's performance. While most of the clauses that an institution would see in a research and development (R&D) contract do not change much over time, it is still necessary to know exactly which version of each clause applies to the contract.

The first step in looking up a FAR clause is to have access to the FAR.[7] The next step is to determine from which chapter of the FAR the clause has been drawn: Is it a basic FAR clause (Chapter 1), or is it from one of the agency supplements (Chapters 2 and above)? Once the chapter has been identified, go to Part 52 of that chapter, as that is where all of the clauses of that chapter will be located.

The clauses will be listed in numerical order, by section and then by subsection. Read the clause and determine if it is acceptable to your institution. If it is not, look to the beginning of the clause to find a statement to the effect that: "As prescribed at [specific FAR reference], insert the following clause." This is the cross-reference to the prescribing instruction. Then follow the cross-reference to wherever it indicates within the same chapter, read the prescription for that clause, and determine whether the clause should be in the contract given the variables of your situation (e.g, type of contractor, dollar value, contract purpose, etc.).

For example, if looking up the clause 52.249-6, the cross-reference at the beginning of the clause states: "As prescribed at 49.503(a)(1), insert the following clause." Then, following that cross-reference to Chapter 1, Part 49, Subpart 5, Section 03, Subsection (a)(1) one would find the following:

FAR 49.503(a)(1)

(a) Cost-reimbursement contracts—

(1) General use. Insert the clause at 52.249-6, Termination (Cost-Reimbursement), in solicitations and contracts when a cost-reimbursement contract is contemplated, except contracts for research and development with an educational or nonprofit institution on a no-fee basis.

[7] *See footnote 2. Also, each agency is responsible for making available its own supplement to the FAR and its respective FAR chapter can often be found on the agency's website.*

Having read the prescription for this clause, it is easy to see that it is intended for other than educational institutions and nonprofit contractors. This is not an appropriate clause, therefore, to include in a contract with a nonprofit. This does not specifically tell one that there is another clause for nonprofits but, given the fact that nonprofits are specifically excluded from the use of this clause, the implication is that there is another clause that should be used. And, since all of the prescriptions for the various versions of a clause addressing a particular topic are generally grouped together, it is merely a matter of scanning through the other prescriptions under 49.5 to see if there is a clause prescribed for the particular set of variables that apply. As it turns out, the necessary prescription is located just a bit earlier in the section – 49.502:

> **FAR 49.502(d)**
>
> *(d) Research and development contracts.*
>
> The contracting officer shall insert the clause at 52.249-5, Termination for the Convenience of the Government (Educational and Other Nonprofit Institutions), in solicitations and contracts when either a fixed-price or cost-reimbursement contract is contemplated for research and development work with an educational or nonprofit institution on a nonprofit or no-fee basis.

Please note that not everything is "black-and-white" when dealing with the FAR. Sometimes there can be a difference of opinion between the institution and the contract officer as to just how a prescription should be applied. For example, among the several termination clauses, there is a specific termination-for-convenience clause for use with universities performing basic research. There is also a termination-for-default clause for use in service contracts. If the institution were to find the service contract version of the termination clause in the R&D contract (52.249-4), it might be due to a difference in interpretation of the nature of the work the institution is doing, rather than a mistake on the part of the contract officer. In this situation, before the institution requests a change to the termination clause, it may first need to explain to the contracting officer that the institution is performing research and development. Of course, if the scope of work does not support the assertion by the institution that the contract is for research and development, the institution may not be able to convince the contracting officer to modify the contract terms.

Or it could be that not all of the information necessary to evaluate the prescription is available *within* the prescription. Each part of the FAR includes a discussion of the government's reasoning behind the need for a particular requirement. This can often include cross-references to federal laws or other FAR parts. Thus it may be necessary to review the background policy and procedure statements preceding the prescription to discover the government's intent behind different versions of a particular requirement. This background knowledge can greatly assist the institution in formulating an argument in getting a clause removed, particularly if the prescription doesn't give the institution the ammunition it needs.

Using the FAR becomes easier and faster with practice; with practice the institution will get to the point where it will immediately recognize various clauses. A question that often is raised when discussing the FAR is: "Why hasn't anyone come up with a list of clauses that are universally unacceptable to universities, including the alternate version of the clause that is acceptable?" The reason for this is that it just isn't practical. Each contract is different (universities accept R&D contracts, construction contracts, and supply and service contracts), each university is different (some universities have more latitude than others as to what terms they can accept; for example, most universities do not accept publication-restricted projects, but some do). Furthermore the FAR is constantly changing. If a list of acceptable/unacceptable terms and conditions were created, it would have to be maintained or it quickly would become out of date. This would be very time consuming.[8] (An institution could, however, do this for its own purposes and assign someone to keep it up to date.)

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[8] *An in-depth discussion of the FAR is beyond the scope of this work, but workshops, conferences, and online programs are available from NCURA on various aspects of this topic. See more at www.ncura.edu*

CONTRACTS AT THE NEGOTIATION/ EXECUTION STAGE

Regardless of whether contract negotiations begin with submission of the proposal or afterward, the process is the same as follows:

- The proposed contract terms must be reviewed.
- Their acceptability must be determined.
- Any exceptions must be submitted to the contract officer.

While negotiation techniques and strategies are beyond the scope of this work, it would be useful to discuss some of the issues specific to negotiating research contracts.

Fixed-Price vs. Cost-Reimbursement Contracts

Fixed-price contracts are those in which the value of the contract is determined primarily by whether the overall price of the proposal the institution submitted is a good value compared to the work to be accomplished, or by comparison to other proposals submitted for the same solicitation. In general individual items of cost are not considered. Once the parties have executed a fixed-price contract, the government is obligated to pay, provided the contractor delivers. This is the key point to understand — under a fixed-price contract, *payment is usually based upon performance, whether performance is measured by meeting milestones, achieving a percentage of effort, or satisfying a set of deliverables.*

If the contractor does not deliver as contractually obligated, the government does not have to pay. And the reverse is also true: If the contractor delivers, the government will pay the full contract price, even if that amount exceeds the contractor's actual costs. In other words, provided the contractor delivers, it can keep any fixed-price funds that are in excess of its costs. Once delivery of goods or services is accepted by the government, it has basically written off the entire contract price.

The government prefers to do business using fixed-price contracts, as this places most of the financial risk on the contractor. For example, if the contractor's costs increase beyond the price estimated in its proposal, the government will not increase the amount of the award; yet, the contractor still must deliver as specified in the contract at the originally contracted price. For the most part, only if the government changes the specifications of the contract would the contractor have the opportunity to renegotiate the price. By far the majority of government contracts are fixed price. This is the standard model used by the government when contracting with the private sector; it is also the primary method of contracting by private sector parties.

Cost-reimbursement contracts, on the other hand, are based on expenditures. The contractor is reimbursed for the expenditures it incurs in performing the contract and is not expected to perform once contract funds have been exhausted. Reimbursement is based upon submission of invoices, rather than on performance. The contractor is only expected to deliver what it can accomplish, given the available funds and period of performance stipulated in the contract.

A cost-reimbursement contract is a much riskier proposition for the government than is a fixed-price contract. Under a cost-reimbursement contract, the government may or may not receive everything anticipated in the scope of work, depending on how well the contractor estimated the necessary costs of the scope of work, or how well the contractor controlled its expenditures. But, since payment to the contractor is based upon expenditures, if the statement of work is accomplished prior to full expenditure of the funds, the unexpended balance must be returned to the government.

The government prefers not to use cost-reimbursement contracts. It does recognize, however, that cost-reimbursement contracts are appropriate in certain situations, such as when the costs to undertake the scope of work cannot be readily determined in advance (for example, in the case of research and development). In fact most federal grants are issued as cost-reimbursement awards (e.g., payment based on expenditures, rather than performance), even though *the term* "cost-reimbursement" is not generally used with respect to financial assistance awards. Because cost-reimbursement contracts are more risky for the government, it will usually include audit and financial reporting requirements in the contract, requirements that don't normally appear in fixed-price contracts.

In negotiating a cost-reimbursement contract, the government will usually examine the cost proposal very carefully in an attempt to fully understand each line item and determine if it is necessary for the effort. The contract officer will most likely request back-up documentation for all personnel costs and for any other costs that are either large or inadequately justified in the budget justification. The contract officer's job in this situation is to negotiate the contract's total estimated cost downward, to the extent that proposed costs are not supported by adequate justification. The contract officer is attempting to reduce the government's potential risk by capping the total estimated cost of the contract.

It may take several communications before the contract officer is satisfied with the contractor's cost estimate. At some point the contract officer will request the institution's best and final offer. The term "best and final offer" is really more applicable to the commercial sector, where the fee or profit is also part of the negotiation. But, then, the commercial sector is where most federal procurement activity takes place, thus many of the terms used in the FAR are based upon commercial sector concepts. In any case, when the contract officer requests the institution's best and final offer, this is intended to be the end of the budget negotiation.

Terms and Conditions

When requesting changes to the contract's terms and conditions, it is important to provide a detailed justification as to why the requirement is problematic for the institution, not just that it is unacceptable. When taking exception to FAR clauses, and using the prescription as the basis for the request change, it's best to cite the reference number for the prescription for each FAR clause the institution wishes to address. For example:

> **FAR 52.249-6 Termination (Cost-Reimbursement)**
>
> As prescribed at 49.503(a)(1) please replace this clause with "52.249-5 Termination for the Convenience of the Government (Educational and Other Nonprofit Institutions)", which is the appropriate termination clause for use with educational institutions.

In this example the institution requests the change and guides the contract officer to the exact spot within the FAR necessary to support the request. In so doing, the institution makes it much easier for the contract officer to come to the same conclusion the institution did and likely would generate more goodwill than simply requesting that the clause be changed. Following are some unique features of contracts.

Termination. For the most part, only the federal government may terminate a contract. The concept of mutual, 30-day advance notice of termination, customary in agreements between universities and under many financial assistance awards, does not exist in the procurement world (although it could theoretically be negotiated into the contract terms).

Equipment. By default, title to equipment will vest in the government, unless specified otherwise in the contract. Most universities would then request title at the end of the contract, at the point at which they request disposition instructions from the government. (Depending upon the circumstances, the government often approves such requests.) All government-owned equipment must be tracked and accounted for in accordance with the property management clause of the contract.

Cost Principles. By default the commercial cost principles will apply to cost reimbursement-type federal contracts; these are detailed in Part 31.2 of the FAR. In order to get the institution's cost principles to apply, request that the "Allowable Cost and Payment" clause (52.216-7) be modified appropriately. Note that cost principles do not apply to fixed-price contracts, only to those that are cost reimbursement.[9]

Administrative Requirements. That portion of the Uniform Guidance that describes administrative requirements, 2 CFR 200.200 through 200.329, and 200.333 through 200.399, will not apply to contracts. Note, however, that the subrecipient monitoring requirements of the Uniform Guidance, 2 CFR 200.330 through 200.332, will apply to subcontracts for programmatic effort issued under federal prime contracts. The reason for this is that all of the administrative issues addressed by the Uniform Guidance (property management, procurement, audit, inspection, access to records, reporting, etc.) are already covered by the various clauses of the FAR. This is one of the risks for an educational institution in accepting contracts — the assumption that existing institutional systems, which may be sufficient for compliance with the Uniform Guidance, will also be sufficient to manage the contract's administrative requirements. They may be, or they may not be. Each contract must be reviewed in light of this risk.

Subcontracts. The concept of a subaward (a subcontract for programmatic effort) is not recognized by the FAR. When the government uses the term "subcontract," within the FAR, it is referring to all contracts, consulting agreements, purchase orders, procurement card transactions, etc., entered into under the contract. It is important to keep this in mind when reviewing the "subcontracts" clause (52.244-2) that is included in most contracts. Further *since the administrative requirements of the Uniform Guidance (2 CFR 200.200 through 200.329 and 200.333 through 200.399) do not apply to contracts,* programmatic effort subcontracts are not exempt from the standard federal cost/price analysis and open bid requirements, the way they would be under a financial assistance award. The subrecipient monitoring requirements of the Uniform Guidance (2 CFR 200.330 through 200.332), on the other hand, do apply to programmatic effort subcontracts under federal prime contracts. This means that programmatic effort subcontracts must meet both the procurement standards of the FAR as well as the subrecipient monitoring requirements of the Uniform Guidance. Lastly the inclusion of a subcontract as a line item in the budget does not constitute prior approval of the subcontractor, only of the need to acquire that service or commodity. Prior approval of the transaction, or at least prior notification, may still be required by the contract officer, in accordance with the subcontracts clause in the contract.

Period of Performance. A contract's start date, by default, is the date of signature by the government. This can pose a problem for researchers who assume that they will have the freedom to obtain pre-award costs up to 90 days before the official start date. "Expanded authorities" that provide certain flexibility to award terms only apply to financial assistance awards (via the Uniform Guidance). Therefore it is important to educate researchers regarding the *substantially greater risks associated with advance spending in anticipation of contract awards.*

Audit Requirements. The audit requirements within the Uniform Guidance apply to cost-reimbursement contracts in addition to financial assistance awards.

Negotiations. One of the most difficult situations that can arise is when the principal investigator (PI) on a contract wants to accept a contract that has terms and conditions that are unacceptable to the institution. PIs often become frustrated as a result of the protracted negotiations that sometimes occur when universities negotiate complex contracts. As with any negotiation, it is important to keep the PI informed of the progress and to include him or her in the process and to explain which clauses are problematic and why. Often the institution can use the PI's relationship with the federal program officer as leverage when the negotiations reach an impasse. In such a case, ask the PI to contact the program officer and explain the situation. If the PI can obtain the program officer's support, it may greatly help move the process along, as the contract officer would then receive the same message from both sides.

[9] *Beginning with federal awards issued on or after December 26th, 2014, the Uniform Guidance (2 CFR 200) will replace the OMB Circulars and automatically apply to contracts issued to those contractors who would otherwise be subject to the Uniform Guidance. In the event of a conflict between the terms of the Uniform Guidance and a contract, the contract terms will take precedence. Agencies issued their respective implementations of the Uniform Guidance on December 19, 2014, which can be found within each agency's section of the CFR.*

CONTRACTS AFTER THE AWARD

PIs and support personnel who are used to working with a particular agency may be accustomed to the reporting and prior-approval requirements of that granting agency, and therefore should be given a heads up that the terms of the contract should be reviewed carefully because *every contract is unique*. Reporting requirements will be detailed in the contract, as will the termination, invoicing, payment, property management, inspection, and other requirements. For most financial assistance awards, these issues are addressed using a commonly applicable, standard set of terms and conditions that are incorporated by reference into the award. With a contract, however, each of the requirements in the contract has been specifically selected for the particular situation.[10]

Institutions unaccustomed to managing contracts often find themselves in difficulty when those responsible for the administration of a contract make the assumption that the terms will be the same as with a financial assistance award. *The most important action that can be taken at the point of contract award is the clear and detailed dissemination of contract requirements to those responsible for administering the award.*

For central and departmental personnel unaccustomed to managing contracts, it is not enough to simply provide a copy of the contract. If any of these individuals are unfamiliar with contracts, they may in all likelihood simply ignore the included FAR clauses, either because they don't know what they are, or if they are vaguely aware of them, they may assume that they are more of the "representations and certifications-type" requirements that don't directly affect the day-to-day management of the award. Therefore, it is essential that the office that disseminates the award also provide sufficient detail of the contract requirements, especially to those who may not be familiar with how contracts work, such that PIs and support personnel can perform their jobs in accordance with the contracts' terms.

While it is not practical to provide a list of all possible contract requirements, Figure 4 contains a sampling of FAR clauses often seen in R&D contracts with universities that have some direct impact on project administrators and/or PIs.

[10] *Note that the full text of most of the FAR clauses will not be included in the contract; they would still need to be looked up in the FAR. The point is, however, that the individual clauses were specifically chosen for the contract.*

Figure 4. Sample FAR Clauses in R&D Contracts with Universities

Clause #	Clause Title	Brief Description
52.216-7	Allowable Cost and Payment	Establishes default invoicing, payment and closeout requirements for cost-reimbursement contracts. Also identifies applicable cost principles.
52.219-9	Small Business Subcontract Plan	Requires submission of periodic reports documenting progress made towards meeting subcontract plan goals.
52.232-20	Limitation of Cost	Requires contractor to notify the government when, it expects costs will be greater or substantially less than the estimated cost.
52.232-22	Limitation of Funds	Requires contractor to notify the government when, in the next 60 days, expenditures will reach a specified percentage of obligated funds.
52.244-2	Subcontracts	Specifies prior approval and notification requirements for the issuance of subcontracts (Note: This clause applies to all subcontracts, including purchase orders).
52.245-1	Government Property	Establishes vesting of title (default is government), record keeping, and reporting requirements for property.
252.204-7000	Disclosure of Information	Requires prior governmental approval of publications.
252.227-7039	Patents - Reporting of Subject Inventions	Requires submission of annual and final summary of invention reports on DD Form 882.
252.235-7010	Acknowledgement of Support and Disclaimer	Establishes requirement for "acknowledgement and disclaimer" statements in publications.
252.235-7011	Final Scientific or Technical Report	Specifies default technical reporting requirement.
252.246-7000	Material Inspection and Receiving Report	Requires that DD Form 250 be included with all deliverables (including technical reports).
1852.242-73	NASA Contractor Financial Management Report	Requires contractor to submit quarterly and/or monthly financial management reports.

STOP-WORK ORDER

A “stop-work” order is an instruction issued by the government to suspend work under a contract but without terminating the contract. The order will specify a date beyond which the contractor may not perform. In other words, any costs incurred after that date become unallowable, except to the extent that they were in some way unavoidable. The most important thing to know about a stop-work order is that if an institution receives one, the institution must in turn issue one to each subcontractor or vendor working under the contract at the time of the order, giving them the same date to stop work. If the institution does not issue stop-work orders to subcontractors, the institution may find itself liable for the subcontractors’/vendors’ cost, without recourse to reimbursement by the government for any of those costs incurred after the date specified in the stop-work order.

A stop-work order by default can only last for 90 days before the government must do one of the following:

- Authorize work to begin
- Extend the stop-work period
- Terminate the contract

If the stop-work order is lifted, the contractor may submit a proposal to the government to request reimbursement for costs incurred as result of the stop-work order (but not during it). For example, if project employees left because of lack of work, there could be costs associated with hiring and training replacements once work has been reauthorized. If the contract is terminated, then the contractor would submit a termination proposal in accordance with the termination clause.

CONTRACTS WITH THE PRIVATE SECTOR

Contracts with the private sector can present unique challenges for any institution. Often difficulties arise due to differences in organizational "culture." Academe is nonprofit and supports research and education by the free and open exchange of information. On the other hand, the private sector is for-profit and may conduct or participate in research, but needs to maintain secrecy in such endeavors in order to ensure economic viability over its competitors. The cultures are not mutually exclusive, but a lack of understanding by one party of the other's view point can make collaborations difficult.

As just mentioned, the private sector approaches research differently than does a university. The types of contract terms and conditions to which universities customarily take exception, such as terms that restrict an institution's ability to freely disseminate information, are all standard business practices in interactions between private sector entities and even between the private sector and the federal government.

Unlike "collaborations" among universities, business relationships are not generally viewed by the private sector as collaborations; rather there is a buyer and a seller in such relationships. When a company offers a contract to a university, it is usually looking at the arrangement as a purchase, not as a collaboration. So it is reasonable from the company's viewpoint to include commercial terms and conditions in the contracts they offer to universities, even when two universities would treat the same scope of work as a collaboration. Unless they have experience with university research culture, companies often don't understand why universities have so many concerns over what to them is standard practice.

There are two primary modes of interaction between universities and the private sector: contracts using the company's own funds, and subcontracts issued under a federal prime contract. There are many issues that may arise when working with the private sector, such as intellectual property, material transfer, confidentiality, export controls, and publication rights. Depending upon whether the contract involves private or federal funding greatly influences the extent to which these issues raise concerns with universities.

Private-Sector Contracts under Private Funding

One of the most useful tools that an institution can have at its disposal when collaborating with private sponsors is a standard research agreement template. The template acts as a starting point for negotiations and should incorporate all of the terms and conditions that the institution feels are necessary, such as right to publish, ownership and licensing of intellectual property, confidentiality, and indemnification.

Providing this template along with the proposal to a company can go a long way toward facilitating the negotiation process. To begin with, the institution is letting the company know up front where it stands. Secondly the institution is, in a sense, preempting the company's issuance of a purchase order with commercial terms and conditions. Further it is more advantageous for the institution if the negotiation starts by modifying the institution's agreement, than for the institution to be trying to modify the company's contract or purchase order.

Many institutions are using such agreement templates successfully with industry. Thus, if an institution is looking to develop a template or update an existing one, it might be helpful to obtain copies from sister institutions and talk to colleagues about their experiences in using such templates.

Private-Sector Contracts under Federal Funding

One of the cultural differences between universities and the private sector is how each responds to a federal solicitation. A company looks at a solicitation as a business opportunity — a chance to further its business goals and to generate revenue. If the company decides to respond to the solicitation, it will establish a team dedicated to putting together the cost and technical proposals; it would be almost unthinkable for a company to submit competing applications in response to the same solicitation.

University proposals, on the other hand, tend to be PI driven. A PI decides to which opportunities he or she will apply, and it is not unusual for more than one PI at an institution to submit applications to the same solicitation or opportunity. PIs are usually the lead for their respective proposals, and central administration often does not become involved until requested to do so. As a result, university/industry collaborative submissions can be a learning experience for both parties.

When a company is subcontracting with federal funding, another layer of complexity is added. This is because federal awards normally impose upon the awardee the requirement to flow down certain terms and conditions to any subawardees. So an industry subcontract will include the federal terms that must be flowed down, plus most of the commercial terms and conditions it would normally impose on a supplier.

Many large companies do so much subcontracting that they have developed boilerplate terms and conditions that combine both their commercial terms and the federal flow-down requirements. In the majority of cases, the flowed down FAR clauses will be incorporated into the boilerplate terms in the same format as the institution would have received them directly from the federal government. But the institution will also come across situations where the company will have re-written the federal terms, such that the identifying FAR clause numbers and titles have been removed. The federal requirements are still intact, they are just not as easily identifiable as specific FAR clauses. Having access to an electronic or online version of the FAR is important in these situations, because the best argument to get an undesirable FAR clause modified or removed is to refer back to the clause's prescription.

As an institution reviews the terms of the subcontract, it still must determine the acceptability of each requirement. When a university receives a private-sector contract that uses the company's own funds rather than federal funds, the agreement truly represents only what the two parties have agreed upon. Under a federal award a company may be reluctant to negotiate the flow-down terms because it simply does not feel it has the authority to do so. Thus when a university is requesting changes to requirements — such as prior approval of publications — it is important to understand that the company must first be convinced that the requirement should be changed, and that it may then have to convince the federal contract officer of the importance of the issue in order to obtain a deviation from having to flow down the requirement to the institution.

INVENTIONS UNDER FEDERAL SUBCONTRACTS

According to federal statute (the Bayh-Dole Act), the government receives a non-exclusive, royalty-free license to any inventions generated with federal dollars, no matter how far down the procurement chain the invention was developed. As a result, in this one situation, there is a direct relationship established between the government and every subcontractor. The government's rights are known as "government purpose license rights." Also, according to the Bayh-Dole Act, a contractor may not "take" rights to a subcontractor's inventions as a condition of issuing the subcontract. The subcontractor can agree to give up those rights by accepting terms to that effect, but the prime contractor cannot force them to do so.

The company with whom the institution is negotiating may justify its need for ownership and/or control of inventions to ensure that it has access to the technology in order to accomplish the prime contract requirements. However, it already receives whatever access it needs to accomplish the government's objectives by virtue of its prime contract with the government. Because the government already has its government purpose license rights, the company obtains the rights it needs via this mechanism.

When reviewing subcontracts of federal funds, therefore, be sure to look for wording that gives the company rights to the inventions; the institution will most likely want to remove it. A company can request — but not force — an institution to give up such rights.

SPECIAL ISSUES FOR SMALL INSTITUTIONS

The challenge for small institutions in administering contracts is that regardless of the institution's size, all contract requirements must be followed. For example, if an institution accepts a contract that requires submission of a subcontracting plan, then the institution must find a way to comply with the requirement, even though large institutions often have an individual or even an office dedicated to this one compliance function. No allowance is made by the government for lack of resources when it comes to compliance.

Depending upon the sponsor, contracts can impose a greater administrative burden on the institution than do grant awards, sometimes requiring quarterly or even monthly technical reports, quarterly property reports (title to equipment almost always vests in the government with contracts), annual summaries of disclosed inventions, detailed invoicing, etc. It is vital, therefore, when deciding to accept a contract, that the institution determine up front that it has, or can put into place, the systems necessary to comply with contract requirements.

CONCLUSION

There are several potential areas of risk for institutions involved in contract administration and ways to mitigate them including:

- *unknowingly accepting problematic contract terms upon signing a proposal* (Educating those who approve contract proposals regarding the implication of their signatures will help ensure a successful start to contract negotiations);
- *inexperience with essential topics such as the Federal Acquisition Regulation or intellectual property issues under contracts* (Knowledge of the FAR and of patent and licensing issues is critical if an institution is going to accept federal and industry contracts); and
- *distribution of insufficient award information to research administrators and PIs* (Detailed communication of contract requirements to administrators is essential for successful completion of the contract).

In summary while acceptance of contracts by an institution can pose greater risks than are usually associated with financial assistance awards, these risks are manageable with sufficient communication and education. Contracts represent by far the minority of awards received by educational institutions. As a result the necessary expertise to administer them properly may not be easily accessible at every institution. Most research administrators are more than happy to share their knowledge on these and other issues. Colleagues are an excellent resource, as is NCURA.

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