



Pioneer Forest Products

Technical Proposal

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Economic Impact Paper by Yeon-Su Kim

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Safety Plan

INTRODUCTION AND PURPOSE

Introduction and Purpose of Pioneer's Proposal

Since more than a decade ago, Pioneer has recognized that three things were occurring which brought about a need for development of an efficient process to turn mostly smaller diameter western trees into value-added, finished products. These three things are:

1 - Forest Health:

Western United States forests, especially those on National Forest lands, were becoming unnaturally overcrowded. This is due to policies and land management activities done over the last 100 + years that led to more tree growth than was removed through a combination of fire, rot or decomposition, and logging. This has been well documented by University and Forest Service researchers and others, so we present just a brief summary here.

Large wildfires starting in the mid-1990's, and especially the 470,000 Rodeo-Chediski fire in 2002, made many in the Southwest aware of this lack of balance in southwestern forest ecosystems. It became common knowledge that there were far too many trees for a sustainable ecosystem. Comparison of past and more recent inventories indicate perhaps as many as 20 to 40 trees now for each one present in pre-settlement times.

Efforts to reduce this heavy tree density have been on-going for nearly two decades, but have been hampered by several factors that kept them too small to resolve the problem over so many millions of acres. Lack of funds on a large scale has been prominent among these factors. Lack of businesses that can make all sizes of ponderosa pine trees into high value products has been a big part of this problem.

2 - Job Losses:

Much of the wood used in the U.S., especially finished products, was coming from other countries. This was due to several factors such as older facilities here, cheaper labor, and a "not in my back yard" attitude in the U.S. about cutting trees. Many communities in the West were losing jobs and economic activity needed to enable them to stay healthy and viable. Older mills relying on mostly larger logs were going out of business when log supplies were now from largely smaller, often second growth, trees. Competition from foreign suppliers was keeping prices down in the market for construction materials, where most mills had been finding markets.

Dozens of mills have closed in Arizona and Western New Mexico over the past 20 years, leading to high unemployment rates in communities formerly relying on forest treatments and wood processing for a significant part of their economy.

Finally, finished products made from softwood such as panels, doors, cabinets, furniture and furniture parts was largely coming from overseas, exacerbating the employment downfall in many communities. This has added to job losses, not only in direct logging and milling jobs but in considerable opportunities in the re-manufacture of boards into furniture and other finished products.

3 - Need to Stay Up-to-Date on Technological Breakthroughs in Wood Processing:

In order to stay competitive with foreign suppliers, the U.S. wood processing industry needs to continually upgrade to the latest technology available to enable production of value-added, finished products ready for the consumer market. We found most technology in the United States to lag far behind that in European countries, and even in Europe there were still opportunities for upgrading to the latest technology now available to achieve high yields of solid wood products.

PIONEER'S Solution:

Pioneer has for some years been seeking the most economical way to address the problem, as stated by the Western Forestry Leadership Coalition, of "the cost of reducing fuel loads continues to be prohibitive in locations where timber prices are low or the product itself is not marketable." While some of the products of forest restoration have current markets in Arizona, the large majority coming from smaller trees has no facilities available to provide adequate value to cover the cost of treatments.

Pioneer's facility is designed to convert logs as small as 5 inches in diameter and 8 feet long into high value products, thus solving much of the forest health issue as summarized above. We utilize biomass for energy production to assure complete utilization. The utilization of our 3-phase process to produce final products will maximize employment in the local community, rather than just primary manufacture with boards or other products going elsewhere for the final step, and taking those jobs with it.

The process Pioneer has created will stem much of the job loss across Northern Arizona, providing extensive opportunity for employment in logging, trucking, log breakdown, and finally production of edge-glued panels and many finished products. According to Yeon-Su Kim, 2011, 905 direct, indirect and induced jobs will be created just in Coconino and Navajo Counties by Pioneer's proposed operation.

**TECHNICAL APPROACH
TO
REMOVING WOODY BIOMASS**

TECHNICAL APPROACH TO REMOVAL OF WOODY BIOMASS

Pioneer's field operations will be carried out by Pioneer Forest Products, Corporation. This is a wholly owned subsidiary of Pioneer Associates, LTD. See the Business Plan for a complete organization for milling operations.

I. Personnel

Pioneer has the following personnel committed to working on the forest operations part of this proposal.

Marlin Johnson CF[®], Forest Management. Marlin graduated from Iowa State University in 1965 with a Bachelor of Science in Forestry. He also has additional studies (no degree) from Oklahoma State University in 1965. Mr. Johnson's experience includes:

- February 2008 to present: Work with Pioneer Forest Products to obtain a supply of wood suitable for starting a new wood processing facility. This has included negotiations with Indian Tribes, the Forest Service and private landowners; analysis of haul distances to possible mill locations; costing out alternative scenarios; and logging and transportation issues associated with a large volume of timber and large acreage to be treated. It also includes working with the Four Forest Collaborative Restoration Group in Northern Arizona. His work includes contacts with other businesses and industries to find markets for any wood that is part of the final contract that is either above the needs of Pioneer, or that is not of a size that is desirable for Pioneer's planned facility.
- July 1991 to February 2008: Lead and provided vision for Forestry (silviculture, sales, inventory and planning) for the Southwestern Region of the Forest Service. Develop direction for planning, harvest, and cultural activities for the eleven National Forests in the Region. Marlin played a key role in development and management of the 4-Corners Sustainable Forest partnership, assisted with the Northern Goshawk Guidelines, and authored several articles such as these:
 - The Role of Wood Removals in Sustainable Forest Management in the United States: The Contribution of Federal Lands. Marlin Johnson, Dr. Hal Salwasser, and Barry Bollenbacher. Proceedings International Union of Forestry Researchers. Kuala Lumpur, Malaysia, 2000.
 - Changed Southwest Forests: Resource Effects and Management Remedies. Proceedings Society of American Foresters Convention, October 1996.
 - Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy." USDA Forest Service, October 2000.
 - Co-Author. Defining Old Growth for Fire-adapted Forests of the Western United States. Ecology and Society. 12(2): <http://www.ecologyandsociety.org/vol12/iss2/art15/>.
- From 1987 to 1991, Mr. Johnson worked in the Forest Service Washington Office in Timber Management Planning where he took part in timber sale contract reviews, and in forest planning nationally. From 1968 to 1987 Marlin worked for National Forests in Alaska, Arizona and California with increasing responsibilities in timber management, Timber Sale Contracts and planning.

Marlin also served in the Peace Corps in Bolivia from 1965 to 1967 and worked closely with personnel of the Bolivian Forest Service on resource development and forest inventory in the

Amazon region. He also is fluent in Spanish and is a Certified Forester by the Society of American Foresters

Michael Dean Cooley, Director of Operations. Resident of Arizona from 1956 to present, Mr. Cooley graduated from Westwood High in 1974, spent two years in Madrid, Spain, as an LDS missionary, then enrolled in business classes at MCC in Mesa from 1977 through 1978. He has also taken various industry related seminars and training classes. He was assistant store manager of Wheelwright Lumber (Ogden, UT) from 1978 to 1979 prior to joining the family business, Lumberjack Building Materials in charge of contractor sales. He designed, built, and oversaw operations and sales of remanufacturing facility, Cooley Forest Products in 1979. He was sales manager for domestic and international products from 1985 to 2005 and then served as general manager for Cooley Forest Products from 1999 to 2007. Currently Mr. Cooley is COO overseeing the operations of all subsidiary companies of Cooley Industries, Inc., an Arizona Corporation including: Cooley Forest Products, 1930 W. Broadway, Phoenix, AZ; DTS Trucking, 320 S. 19th Avenue, Phoenix, AZ; DL Brokerage, 320 S. 19th Avenue, Phoenix, AZ, and the operations of Cooley Sawmills located in Heber and Cutter, Arizona

Brent Racher, Restoration Solutions LLC. Qualifications for Dr. Racher include a B.S. in Range Science from NMSU in 1996, and an M.S. and Ph.D. in Range Science from Texas Tech University in 1999 and 2003, respectively. He has specialized in range/forest improvements and fire ecology/behavior which includes hands on experience with a broad range of mechanical, chemical, biological, and cultural methods for controlling undesirable plants while promoting beneficial species. He has also been involved in applications and research involving the thinning, watershed restoration, and wildlife habitat improvement for the past eight years. Dr. Racher's knowledge of forest ecosystems and the ability with mechanized equipment has allowed him to provide the cutting-edge technical abilities with on-the-ground implementation for effectively meeting project objectives. He is able to understand the objectives of this forest restoration project for multiple purposes and how those objectives can be achieved through integrated management approaches.

RS was formed in 2003 to meet the need for integrated resource management and ecosystem restoration in the southwestern United States. Riparian, forest, and rangeland restoration is a primary focus with combinations of mechanical, chemical, and cultural methods. RS brings together cutting edge technical expertise with the equipment, skills, and capabilities to implement desired objectives. RS has the trained, experienced personnel needed to understand project objectives and the ability to implement those objectives to provide the best results on the ground. RS also has the capacity to meet the demands of project requirements, and can provide the quantities and quality of equipment and personnel needed to perform the highest standards. RS, with Brent Racher, was the only commercial forest industry at the table in the creation of the New Mexico Forest Restoration Principles.

Dr. Racher has served on the U.S. Forest Service Collaborative Forest Restoration Program's (CFRP) Technical Advisory Panel (three terms), U.S. Forest Service Collaborative Forest Landscape Restoration Program's (CFLR) Federal Advisory Committee, the Claunch-Pinto Soil and Water Conservation District Board as an Associate Supervisor, the Central New Mexico Cooperative Weed Management Area, the Estancia Basin Watershed Health Steering Committee, and on the Board of the New Mexico Forest Industry Association. Brent also has extensive experience in working with the people and diverse cultures in the project areas. This need to understand and work with the communities and people is necessary for successful implementation of this contract and future work for Pioneer, RS, and the Forest Service in the 4FRI area.

Arizona Based Logging Contractors

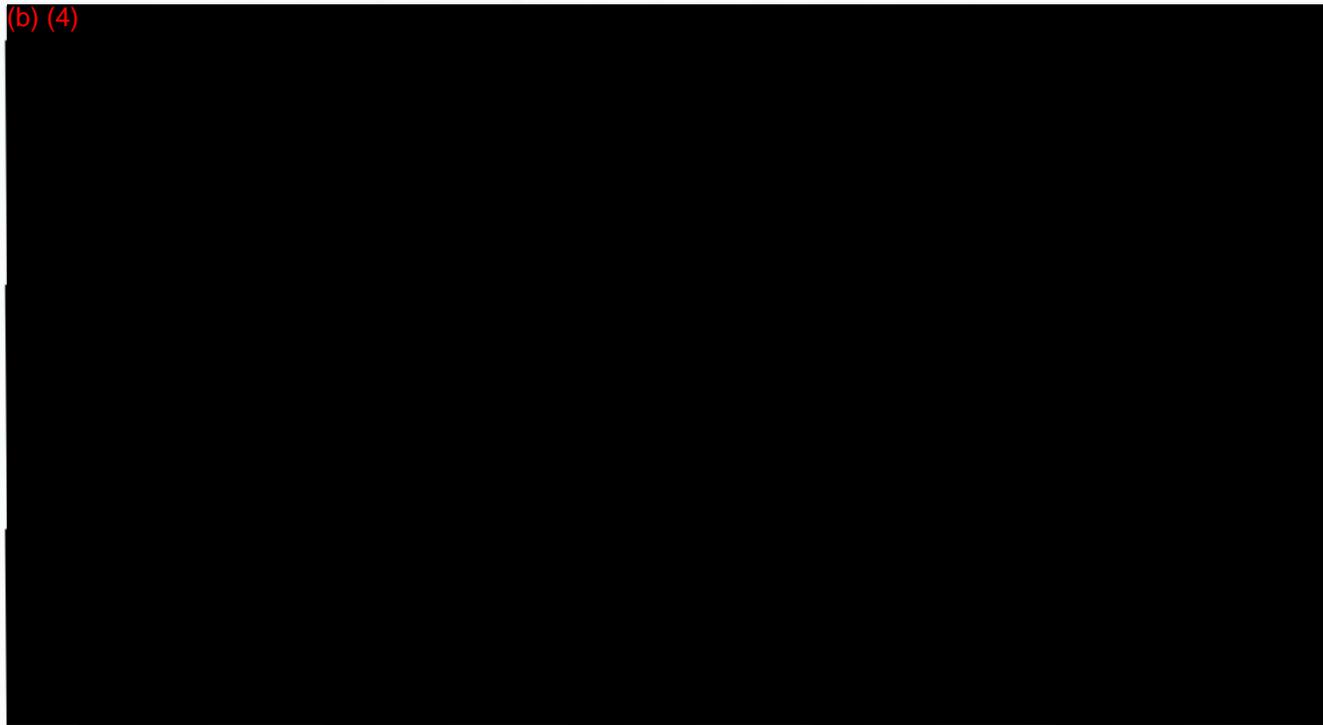
There are 8 to 10 quality Logging Contractors in Arizona, some of which felt it a conflict of interest to sign on to this Pioneer Proposal because of their current involvement elsewhere. Pioneer will utilize all available Arizona contractors to accomplish the goals of 4FRI. However, the total capacity for doing treatments by companies in Arizona is far below the current levels of treatment in addition to the 30,000 acres per year called for by 4-FRI. Some of the current contractors will "tool up" to meet the demand, yet we feel that In order to accomplish this volume of treatment, we must also reach out to surrounding states, as such, we are in touch with two large companies, that could bring their equipment to Arizona to do thinning treatments for Pioneer. While final agreement including pricing has not been agreed to, both have indicated a strong interest in bringing their equipment with one manager for each Side, and hire local personnel for the rest of the operation. Pioneer has made agreements with a few of the contractors operating in Arizona, and each is available to bring their existing equipment, (and expand further) and land treatment experience to assist in implementing the 4-FRI Contract. They are as follows:

(b) (4)



Other potential Contractors from Outside of Arizona and New Mexico

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(b) (4)



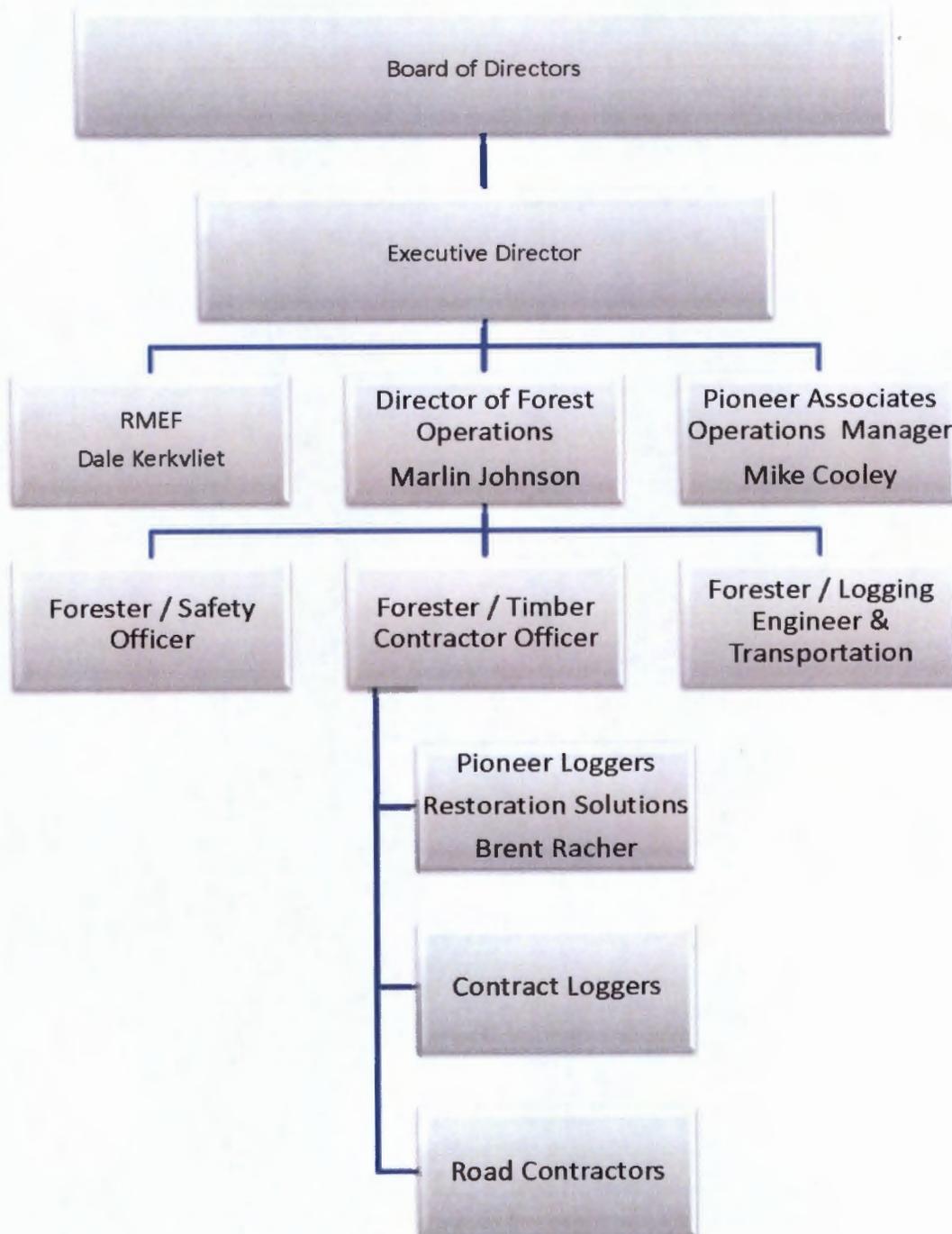
Logging Engineer, to be contracted

Upon receipt of the 4-FRI Contract and final funding availability, Pioneer will contract a professional logging engineer. This individual will do an assessment of ground conditions, forest and hauling conditions, contract requirements, and desired conditions in order to provide Pioneer with recommendations on proper equipment for future acquisitions as we increase capacity in the area. Leaving desired conditions with minimal damage to residual trees, soil and other resources, along with cost effectiveness, will be top priority.

II. Organization and Responsibilities

Following is an Organization Chart of Pioneer's organization as it pertains to treatment operations on the 4-FRI Contract:

ORGANIZATION CHART PIONEER FOREST PRODUCTS



The director of the Forestry staff, Marlin Johnson, will initially be the primary Company representative to the Contracting Officer. When hiring is complete the Forester/Contracting Officer will assume this responsibility. See Organization Chart on previous page. The forestry team will have about four positions with responsibility as follows:

Comprehensive understanding of the 4-FRI Stewardship Contract

- Training/education of field operators and their staff in how to comply with all conditions in the contract.
- Upon commencing work in units where Designation by Prescription is used (DXP) and the Forestry staff will provide extensive training in the Restoration Prescriptions being implemented on that site, in order to assure full compliance with Desired Future Conditions (DFC) on the site. Marlin's extensive involvement in development of restoration guidelines over the last two decades will be invaluable in this endeavor.
- Securing and contracting with 4 to 6 contractors with proper equipment for and experience in doing forest restoration treatments.
- Close review of each logging side, with frequent field assessments and written reports provided to assure contract compliance.
- Assess the capability of each logger, and their need to acquire other equipment in order to maximize efficiency as well as provide protection to resources in the area.
- Include in those reviews and in the training information on road specifications from the Contract.
- Development and operation of a system to monitor progress of field operations.
- Assess each Task Order before commencing operations for special conditions and requirements and assure operators are properly advised.
- At Task Order issuance, provide information to the Contracting Officer on proposed schedule of operation, Sub-Contractor to do that work designation of personnel, and Soil Erosion and Water Pollution Control Plans.
- Assess Course Woody Debris (CWD) requirements in each unit, and the availability of currently down material to provide for those needs.
- Development and operation of another data base to track delivery of logs to the various mills in the area as well as the principal Pioneer mill.
- Provide direction to each logging side as to how to buck logs to meet mill specification.
- Designate a person on each operations site to do inspection reports and document them back to the forestry group.
- Provide direction to each logging side on which mill to deliver logs of various sizes coming from their operation at that site.
- Provide the Company with reports on all aspects of the operation.
- Provide the Forest Service with reports on inspections and other information as needed.
- Safety of field operations.

Mike Cooley will be responsible for overall operations at the Pioneer Mill, in addition to providing input and assistance to the Forestry Staff in securing loggers and road contractors for carrying out field operations. Following are some of Mike's major duties:

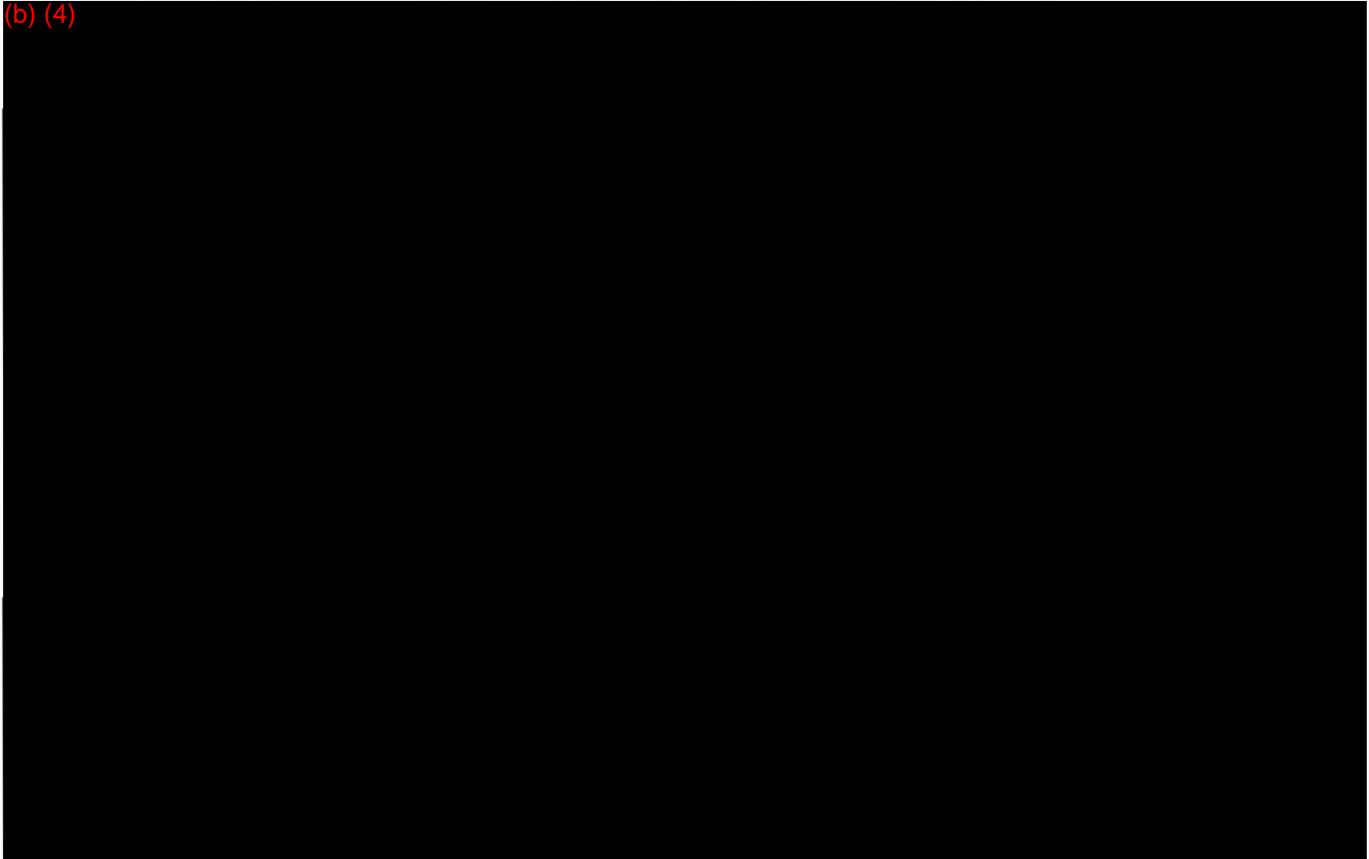
- Assess the capability of potential operators to do the restoration treatments on 4-FRI.
- Develop Contract for use between Pioneer and sub-contractors.
- Coordinate the finalization of our land purchase / lease for the facility.
- Coordinate trucking and delivery schedules to meet target dates.
- Work with forestry group to keep the overall project on schedule and meeting deadlines.
- Work with Biomass utilization partner to coordinate overlay of both operations.

- Work with utility companies for all needed upgrades and scheduling.
- Oversee HR needs to meet our requirements regarding insurance and hiring.

Brent Racher will be doing land treatments for Pioneer on the 4-FRI Contract, but he will also:

- Assist the Forestry Staff with assessment of the machinery and capabilities of other possible contractors
- Make determinations on what equipment will be best in different situations and on different Task Orders.
- Assess possible new machinery options for their utility on the 4-FRI area.

(b) (4)



III. Performance Work Statement

Project Layout and Design

Initially nearly all project layout work – selection of trees to be removed – will be done by the Forest Service. As implementation of the 4-FRI Contract proceeds and the Forest Service and Pioneer leadership become comfortable with the ability of our operators, we will be prepared to move into the operator-select phase. With proper equipment, training, experience and oversight we believe that in many instances, with the agreement of the Forest Service Contracting Officer, we can successfully have the machine operator implement the tree selection based on prescription guides. This should help the Forest Service avoid much of the cost of designating trees by applying paint.

Although the details of this training will be done later when it is needed, below are some key factors Pioneer will take into account during operator training:

- Individual tree condition in terms of disease.
- Individual tree condition in terms of crown condition, which tells if that tree will release and grow properly.
- Desired tree spacing in the group to achieve interlocking crowns as soon as possible; this is to provide habitat for squirrels and other wildlife needs.
- The balance of size/age in groups to set up a sequence that over time will always provide a mix of all sizes and age classes.
- Size of desired groups, generally from ¼ to ¾ acre with some groups larger for diversity and to take advantage of existing tree mix on the site. (I.e. larger size groups can be to maintain a group of larger trees, which are sometimes in short supply, as well as to remove a group of diseased trees in order to allow starting a young group that will lead toward a healthy mix of sizes in the future.)
- Spacing between groups will vary by site condition and fire protection needs (I.e. Wildlife Urban Interface and proximity to developments or key habitat features), this will largely be specified in Marking Guidelines from the Forest Service but Pioneer's machine operators will be trained to recognize and emphasize these needs.
- A reasonable number of trees of poor form class will be left to assure niche habitat such as large limbed trees, mistletoe brooms and future snags are provided for.
- Snags, both hard and soft, will be left to meet standards while always being tuned to operator safety and related OSHA standards.
- Maintenance of healthy gambel oak trees and groups for its' many wildlife benefits.

The above are primarily for the Ponderosa pine forest type, in Mixed-conifer there will be some variations. Density will also be adjusted appropriately for Northern Goshawk PFA's, nesting habitat and in MSO territories.

Where on-the-ground conditions, or the Task Order specifications, require leaving of CWD in addition to what is already there, Pioneer will prioritize as follows while first meeting specifications:

1. Trees with curvature or other defects that make them worth little for milling
2. Trees under 6 inches DBH
3. Higher quality trees or logs

Training for Stewardship Work in the Forest

The 4-FRI Collaborative Group, of which Pioneer is a participant, has already started discussions on how to develop the training for the large number of positions that will be needed in harvesting, hauling, and other related positions such as stewardship activities. Pioneer's team of staff foresters, in conjunction with the 4-FRI Collaborative Group, The Northern Arizona Wood Products Association (NAWPA) and likely a local Community College, will develop needed training programs in different areas of work to assure that the diverse fields of work are covered. For example, we will need training for machine operators to understand available techniques for removing designated trees while minimizing impacts on both the ground and on trees and vegetation selected to remain on the site. An outline for this training will be developed while the Forest Service is evaluating Proposals and be ready soon after Contract Award. NAWPA, Northern Arizona University's Ecological Restoration Institute and RMEF have expressed interest in supporting Pioneer in this effort.

Operations

The lead forester will be the Overall Project Manager for Pioneer Forest Products, as a wholly owned subsidiary of Pioneer Associates, LTD., and will be responsible for assigning Sub-Managers and Contractors for individual treatment areas.

Oversight for field operations will be provided at three levels. First is the Pioneer Forestry Staff, who have overall responsibility for contract administration and control for Pioneer Forest Products and will visit work sites frequently. Next, each sub-contractor will be held responsible of seeing that operators on each Side have and are following appropriate Contract clauses for that area. Finally, a person on-site will be designated with responsibility for that Side. There will be a 7 month period we refer to as "pre-development" while permits, studies and other details for our mill are developed. After that our "Operations Schedule" begins. During the first month of Operations and Mill Construction, woods operations will begin on a small scale for testing capabilities and for training, with products delivered to other mills in the area. In the first year after Contract signature, perhaps 4,000 to 5,000 acres could be treated. Pioneer will also be contracting with additional loggers for beginning treatments and log deliveries to the Pioneer Mill in Operations month 7. Additionally, Pioneer staff will take advantage of this time to assess road conditions and secure road contractors as needed to assure we have suitable roads for our needs and that meet specifications.

Upon reaching month 7 of operations (7 months after final permit for the mill site and breaking ground, or about 13 to 14 months after signing the contract) log delivery will commence to the Pioneer Mill.

In Operations month 7, we will go to about one-half our final treatment rate and ramp up over a period of 12 to 14 months to the 30,000 acre level annually. Month 7 will see about 1,000 acres treated, ramping up to 2,500 acres per month by month 20. Thus, the second 12-month period of the Contract will result in about 23,000 treated acres. Year 3 will be at 30,000 acres.

Per the responses to questions in Amendment one of the Solicitation, actual harvest can go on beyond year 10 of the Contract, when the last Task Orders must be issued. With years 1, 2 and 3 totaling 48,000 acres, and assuming one year to complete final harvest, the last 8 years of logging would need to average about 31,500 acres. Alternately, if 1.5 extra years is used, the average for the last 8 years is 29,650 per year. Pioneer will be able to go to either of these levels easily, by putting on a Saturday shift at our mill if needed to process the resulting wood.

The initial logging will be done for the most part by local loggers with their existing equipment. In addition to (b) (4) we are in contact with several including (b) (4) and potentially (b) (4) s (See letters in Appendix) if needed. We have also heard from others including (b) (4) and others of their interest in working with Pioneer. We are aware that some operators do not have their equipment fully occupied, and will be contacting them during pre-development and offer them the opportunity to work on 4-FRI before bringing in outside entities. We will also work with multiple

road contractors as needed.

Thinning and treatments will be performed through the use of mechanized equipment. The equipment currently available for this scope of work includes, but is not limited to, rubber-tired feller bunchers, tracked feller bunchers, rubber-tired skidder, forwarders (where necessary), cable yarders (where and when they may be necessary), processors, log loaders and other support equipment such as service vehicles, mechanics trucks, chainsaws, graders, dozers, lowboy transports, and fuel trailers/transfer tanks. If slash treatments require other equipment such as masticators or excavators, those are also available.

Throughout most of the project area, restoration will initially occur by cutting trees with a rubber-tired feller buncher. These will be skidded into landings whole tree, where they will be delimbed, topped, and sorted into commercial logs of two different size classes, and other biomass. Skid trails will be in areas approved by the COR or their designee. The commercial logs will be hauled in log form, and the biomass will be chipped at the landing then removed. Following treatments, skid trails and landings will be closed to prevent resource damage. Disturbed areas will be seeded with an approved seed mix as needed. We have access to a mix previously used on the Kaibab National Forest and will use it unless the Forest Service has another one they prefer.

Our equipment selection, which will be upgraded and modernized as time goes on and as a need is indicated, will provide the most economical and efficient operation while providing for minimized disturbance of treatment sites by having all cutting and removal performed at one time and slash work performed at the landing.

There will be some areas where other types of equipment are needed due to site conditions. For example, some slopes will require tracked feller bunchers or even cable yarders, and some stream-side locations may require forwarding of material. This equipment will be utilized on an as-needed basis.

Through (b) (4) we have access to one smaller and one large mobile canter. This larger mobile canter will be available for use in Arizona on the more remote areas such as Tusayan to reduce hauling cost and assist in keeping treating cost to a minimum.

With the basic equipment described above, Pioneer will assign contractors to task orders or production units where they feel the equipment best matches the area. Within production units the mix of equipment will be at the discretion of the individual subcontractors. As described above, an example of a production unit would be a rubber-tired feller buncher equipped with a hotsaw performing the cutting and bunching of large and small diameter trees; two skidders (or more if skid distance is long) would be able to skid the trees to the landing; a processor would delimb and top the trees to specification and sort biomass from logs suitable for milling; a log loader would load trucks for removal of saw timber; and, finally, after high quality logs have been removed, a grinder would be utilized to chip the biomass material which will flow directly into chip vans for removal of biomass material not needed for forest residue. With this example of a production unit, the rate of treatment in representative areas of the 4FRI Project would be 7-12 acres per day. Therefore, the treatment operations can be sized to meet the needs, year-by-year, of Pioneer and the task orders issued by the Forest Service.

Pioneer understands the magnitude of this undertaking. With an average of 9 acres per side, and about 200 to 220 logging days per year, it will take 16 to 20 sides operating each available day. This capacity will perform the 150+ acres/day necessary to perform the harvesting and treatments. These sides (or operating units) can be separated into different areas, or combined in areas to provide treatments in a concentrated area. Currently with the local operators Pioneer has contacted for the 4-FRI Project, there is the capacity with current equipment for approximately 8 of these sides, or nearly 50% of the capacity needed to perform the Project. These operators will be offered the contracts necessary for them to finance additional capacity to meet the needs of this Project. However, it is expected that additional capacity will still be needed from outside companies, especially during Year 3, of the contract to perform the 30,000+ acres per year. Pioneer has begun discussions for that additional capacity. The

scheduling of adequate capacity will be necessary in order to account for completion of the scope of work while not overtaxing operators and employees. The capacity described above is needed to provide consistent full-time employment to individuals while allowing adequate work/rest periods and days off for employees. These guidelines will improve safety for all operations in completion of this contract.

Based on our knowledge of others in the area, and several we talked to during and after the field trip, we foresee plenty of interested contractors upon award of the 4-FRI Contract. There is excess capacity of operators and equipment throughout the West. Our 6 month pre-development period and the initial months after that of ramping up give ample time to seek out the best qualified, giving local Arizona operators priority.

Operational days available for logging average 200 to 220 annually, however log hauling can often go on more days, perhaps averaging at least 260 days per year. With about 800,000 tons to haul annually, this means about 125 loads daily. On the longer hauls (greater than 70 miles), a driver will be able to make 2 round trips daily, on shorter hauls it will be 3 daily. The average should be about 2.5 trips, resulting in a need for about 50 to 55 total logging trucks and drivers. About 25 chip vans and drivers would also be needed. Thus all the employees in the "Transport by truck" category in the Economic Impact paper, and a few more, would be needed for wood hauling. (As stated under Workforce on page 29, original direct jobs were likely underestimated.)

Local contractors or their sub-contractors have trucks to haul about the same as their capacity to log, so there will be a need for additional trucks. Based on conversations with (b) (4), they alone can help us ramp up to needed levels fairly quickly.

As part of treatment operations, Pioneer will insure that safety remains a priority for Pioneer's personnel and its subcontractors, Forest Service personnel, and the public. As such, twice monthly safety meetings will be conducted on each field site, and Pioneer will provide an inclusive safety plan that addresses treatment operations. A draft safety plan is attached in Appendix.

Transportation of woody material will be from each landing to the varied end user, both Pioneer's mill and other local mills. As stated above, commercial logs will be removed with logging trucks, while woody biomass will be removed in chips vans. If the existing road network within specific task order areas does not allow for standard chip vans transports, stinger-steer vans may be used to facilitate removal. A transportation plan will be in place for all operations under this contract, and site-specific transportation details will be addressed by task orders such as specific safety concerns and haul routes designations. All transportation and trucking operations will also adhere to the work/rest guidelines and days off as described above for equipment operators. Pioneer will inspect truck time logs and record keeping before payment is made, assuring compliance with Arizona Department of Transportation requirements. This will ensure safety of operations and the public safety since trucking operations will have a significant presence on roadways throughout the treatment areas.

Road maintenance will be the responsibility of Pioneer through the contract for the 4FRI. Pioneer will make it part of each subcontract for its operators to maintain the road(s) they use for treatments and removal of logs and biomass. This will help ensure that operators minimize damage to roads. Additionally, most operators in discussions or under contract with Pioneer have road maintenance capabilities such as road graders, dozers, and dump trucks. However, ultimately Pioneer will be responsible to oversee and perform if necessary roads used in the Project area. When necessary, Pioneer will perform road maintenance to meet the specifications in the contract.

During the initial ramping up period of logging, the Forestry Staff, Brent Racher and a professional Logging Engineer to be contracted, will assess the effectiveness of the equipment being used, effectiveness not only in terms of cost but also in terms of its' ability to meet stringent standards of resource protection. This team will determine what other equipment should be brought in to bump efficiency for both criteria up to highest possible levels.

As stated previously, local contractors are limited currently in their capacity to treat the other 17

areas being treated outside 4-FRI in the SW, plus the 30,000 acres annually for 4-FRI. Pioneer will pursue two options to expand capacity. First, existing local operators, with their successful and quality experience in local conditions, will be encouraged to obtain financing to purchase new equipment. This will primarily be done by providing them a contract for a number of years of logging work. The local companies may not be able to ramp-up sufficiently to meet Pioneer's rapid rate of development, in which case 1 to 2 outside contractors will be brought in to bring our capacity up. Operators have and will continue to be sought out who have equipment and know-how to achieve Pioneer's goals of careful treatment of the land with reasonably low costs. Also, if and when operators from outside the area are brought in, Pioneer will see that they hire most of their labor from Arizona.

(b) (4)

These resource costs are estimates based upon past experience. They vary due to factors such as type of equipment, age/condition of equipment, fuel prices, etc. What these estimates do not include is mobilization/demobilization costs which vary by the size of the unit, distance of move, and number of pieces of equipment.

Pioneer has an agreement with (b) (4) for biomass utilization. Under this Agreement most of the woods and mill waste would be turned into diesel fuel. However, they could also produce some electricity for use in our facility. The diesel fuel would go first to local uses such as our own logging and chip trucks, some will likely be sold at a station to be built near-by on I-40, with the rest going to wholesale markets.

Optional Service Work

Optional service work will be assigned through Task Orders from the Contracting Office. Assignment of optional service work will include either the use of stewardship credits when they exist, funding assigned by the Forest Service or work that is cooperatively funded through Pioneer's partner, RMEF. If partnership funding is secured for various work items, like aspen fencing or forage or shrub planting, Pioneer will make a request that appropriate optional work be assigned as part of a Task Order. Fund raising may take several years in some cases so some flexibility in securing and assigning this type work will be needed. This service work could include extra efforts in pre-commercial thinning like wider or closer spacing, planting forage mixes, planting shrub or tree species better suited to meet wildlife habitat needs, seeding closed roads, water catchment or water tanks, locating and treating noxious weeds, fencing aspen stands to exclude either livestock and/or wildlife species (4 foot or 7 foot high fencing), conifer removal from aspen stands, and stream and riparian enhancement treatments. Others may come as this project moves forward. Pioneer and its partners are prepared to complete funded items.

Mobilization Requirements

Within mobilization for field operations in this contract, Pioneer will have requirements increasing during the first three years (b) (4)

(b) (4)

Product Payment Guarantee

Pioneer will supply an acceptable surety payment bond, irrevocable letter of credit, cash, or deposits to meet the needs of any payment and/or performance bond associated with this contract. These bonds, or other manner of surety, will be provided by Pioneer by task order within the contract. By providing the surety with each task order, Pioneer and the US Forest Service will be able to define the amount of the surety, and following completion of the task₁₈

order, the surety for that task order can be released in a timely manner.

Making Payments by Payment Unit

Through the close oversight provided by the forestry staff, Pioneer will monitor each Payment unit for completeness. When they are confident it is complete, they will ask the Forest Service to release that unit. The Forest Service makes the final determination and, upon acceptance of the work will release that unit. Billing for this work will normally come from the Forest Service on a schedule to be determined, but likely on a monthly basis.

Pioneer foresees making payments based on actual weights prorated to proportions developed in Forest Service cruises. The cruise would determine an estimated weight for each payment unit for commercial logs and for biomass. That proportion would be applied by the Forest Service using a spread sheet similar to the one currently used on the White Mountain Stewardship Project. This could be incorporated into monthly billings for that payment unit.

In the case where some of the slash is left in the woods, (this could be needed for soil protection, coarse woody debris requirements, wildlife needs and perhaps for other reasons) the cruise would be the basis for an estimate of that quantity. It would be estimated by the Forest Service and discussed with Pioneer Foresters before billing.

Quality Control Plan and Monitoring

Quality Control by Pioneer will consist of the following:

- Four foresters will be available to oversee treatment operations. The Lead Forester will take overall responsibility for Quality Control. All four will be well trained and knowledgeable of all contract requirements and be (or will become soon) familiar with local habitat types and soil conditions. They will be well versed in ponderosa pine ecology as well as in logging equipment used by our loggers, the capability and expectations of that equipment. They will constantly study new equipment and strategies available to provide maximum protection of vegetation that remains on the site as well as soil and watershed conditions.
- This team will initially be led by Marlin Johnson, who has extensive experience in and knowledge of southwestern forests, especially ponderosa pine forests, including how to restore these forests.
- This team will also develop a training and orientation package for loggers aimed at assuring understanding of contract specifications and safety standards needed to carry out proper Contract implementation.
- In consultation with a person to be designated at each operational site, the forestry team will prepare written reports on progress and issues for transmittal to the Forest Service. These will discuss progress, proper piling or other treatment of slash left on the site, and assess whether or not there were issues with achieving the Desired Condition goals as laid out in the Task order. These reports will also be made available to the 4-FRI Monitoring Board when requested.
- While most slash will be removed from the site for energy development, any material left on the site for CWD or other purposes down to 1" in diameter will be left per Task Order Specifications. To assure the proper standards are implemented on each block/unit, the foresters will brief loggers at the start of each new area to be treated on exactly what is called for in that particular unit.
- With a detailed tracking system, logging progress and log delivery will be tracked in detail. We will gather and report data on acres treated and material harvested in the forests, large logs delivered to our main mill plus those delivered to other local sawmills, and biomass deliveries as well as financial information arising from sales and costs. Again, these reports will be available to the Multi-party Monitoring Board.
- In addition to their reports to the FS contract administrators, our logging contractors will report completed Task Order and cutting units to the foresters for entry into this data base. This will enable close tracking of annual and Contract period goals.

- The above tracking data base will also include weight scale information and other data as needed for making complete quarterly reports, or reporting on any other schedule the Forest Service needs.
- Pioneers will be contracting loggers from companies with current local experience and track records of quality work. They will be required to provide adequate training for their operators to understand appropriate contract requirements, and techniques to meet required and desired conditions as laid out in contract specifications. Pioneer will make this training available to them.
- Each logging contractor will be required to have a person on each site with experience in managing field operations, and responsibility for overseeing operations on that location.
- As increased capacity is required from current levels of activity in Northern Arizona, the first priority will be to encourage effective local operators to increase their capacity by providing them with guaranteed delivery contracts, enabling them to acquire additional equipment. This will recognize good work and encourage operators to take on a larger portion of the total logging operation.
- Because of the rapid expansion in acreage to be treated, Pioneer may need to bring in operators from outside the area who have an excellent track record of quality work. These will be provided training in local conditions and contract requirements, and supervised closely, until Pioneer is confident they are performing to contract specifications.
- This Quality Control Plan will be updated with additional detail as operators are contracted with more details, and will be updated as needed for the duration of the contract.
- Foresters will monitor quality of work by equipment operators, and have training available when potential problems are encountered.
- Adaptive Management: Pioneer will use the findings of its' inspections, quality control and monitoring efforts to constantly evaluate and adapt operations to fully achieve the goals of the 4-FRI Stewardship Contract.
- Personnel from our partners will be utilized to perform the quality control on any assigned optional service work.

PAST PERFORMANCE

PAST PERFORMANCE

Pioneer is a start-up Company. However, Mr. Hauck has experience in the wood products industry, and our other principal participants have extensive experience managing and carrying out forest restoration treatments and timber sales.

Pioneer President Herman Hauck has developed a business to manufacture furniture with edged glued panels, in a totally integrated process, as is shown in the business plan. This plant produces institutional case goods (for hospitals, schools, courthouses, and banks) type of furnishing and mobile storage as shown in the Business Plan. It is located at Dickinson, North Dakota, and is known as TMI Systems. Mr. Hauck sold TMI some years ago and moved on into development of facilities for the health care industry, but his skill in designing and managing a start-up wood processing business is shown by the fact that it is still successfully operating more than 30 years later. Today it is the Nation's largest manufacturer of laminate casework.

Mr. Hauck moved on to start business facilities in the medical field such as nursing care facilities for seniors, but in 1999 decided to move back into the wood processing business by starting Pioneer.

Marlin Johnson, CF[®] has decades of experience leading different organizations and programs within the Forest Service. These at times included large timber contracts, such as on the Lassen National Forest where he was Contracting Officer signing off on about \$30,000,000 worth of timber sales annually. From the mid-1990's until early 2008, he oversaw and provided much of the coordination and vision for the forest vegetation management programs in the Southwestern Region. He not only oversaw the Regional Office Forestry Staff, but with them provided all technical guidance and training to the eleven National Forests. He participated on large and diverse teams such as the Four Corners Restoration Initiative, and provided Regional guidance on implementing Stewardship Contracting.

Mike Cooley is third generation in Cooley Industries Inc., a wood based remanufacturing and distribution facility in Phoenix AZ. In 1978 he headed up the company in the purchasing of 10 acres of raw land and the development of a new remanufacturing plant with the capacity to process over 68 Million BF of finished lumber for the construction and furniture industry, serving 6 surrounding states and export sales into Mexico. In 2007 he purchased a sawmill between Heber and Snowflake Arizona and began operations at this facility. Since then he has worked with the Forest Service in regards to timber sales and small stewardship contracts to secure the needed supply of logs for his sawmill. Cooley's business plan is to develop relationships with outside independent logging contractors such as (b) (4)

(b) (4) many of whom have secured their own timber or stewardship contracts and have supplied Cooley with logs from these projects. Some of them have also logged contracts secured under Cooley. This timber has originated from all four of the National Forest areas defined in the 4FRI contract.

Mike has worked recently with several Forest Service Contracting Officer representatives including:

- Saginaw Timber Sale: Contract number 030405006661. Logging has been accomplished by Southwest Forest Products and small diameter logs were shared with SWF with Cooley receiving larger diameter due to haul distance to Heber, AZ. Contact: Kim Newbauer, Coconino National Forest. Phone (928) 527-3443, Fax (928) 214-2460.
- Gentry Timber Sale, Contract number 202628. This sale was started by Precision Pine and Timber and taken over by Cooley. It has been logged by a small contractor and is

currently scheduled to be completed in 2012. Contact: Dave Maurer, Apache-Sitgreaves National Forest. Phone 928-535-4481, Fax 928-535-5972.

- Bearhide Timber Sale, Tonto National Forest. Contract number 031204 001266. Contact: Jeffrey L. Leonard, Tonto National Forest. Phone 928-474-7946, Fax 602-225-5295.

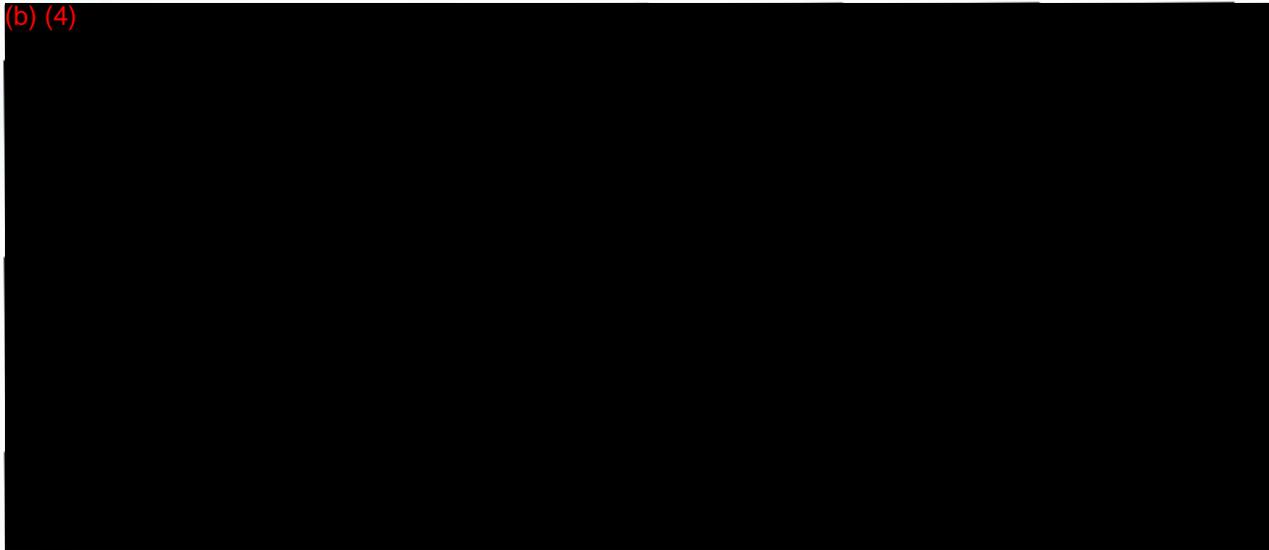
Cooley has also purchased timber from others logging on the Cibola National Forest, and thus has worked closely with Ian Fox, Phone (505) 346-3814, Fax (505) 842-3800. He has also recently purchased the Monighan, South Pequeno and Grande Sales on the Cibola.

Cooley is currently operating a medium sized mobile canter in the Milan New Mexico area, and purchasing timber from the Forest Service and from other loggers who are doing treatments on the Cibola National Forest, and thus has worked closely with Ian Fox, Phone (505) 346-3814, Fax (505) 842-3800. He has also purchased the Monighan, South Pequeno and Grande Sales on the Cibola which will be treated using local loggers as well. Cooley has a second, larger mobile canter, funded in part by a 2010 FPL Grant that will be available for use in Arizona on the more remote areas such as Tusayan to reduce hauling cost and assist in keeping treating cost to a minimum.

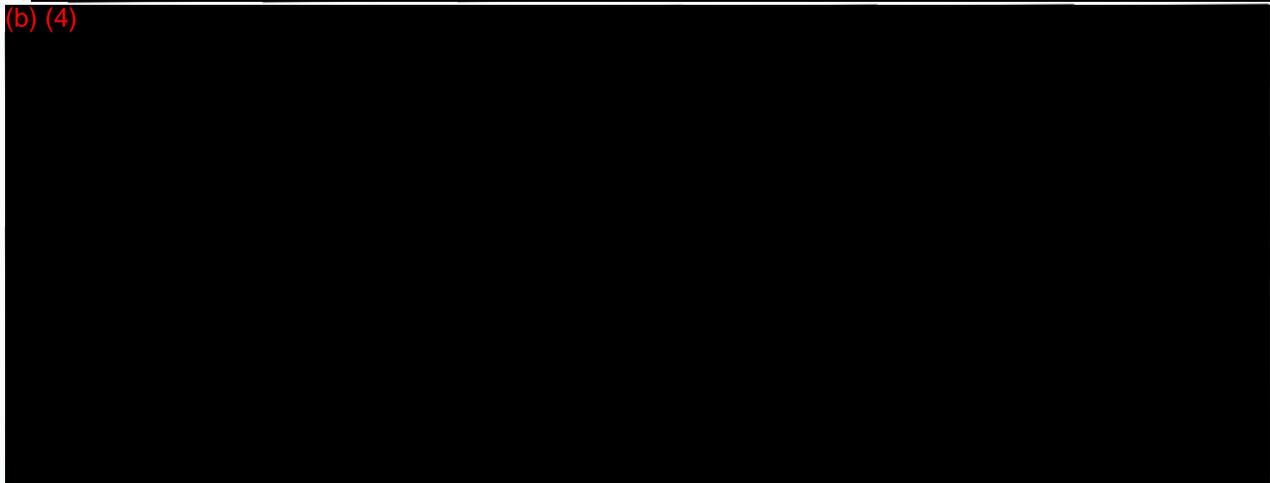
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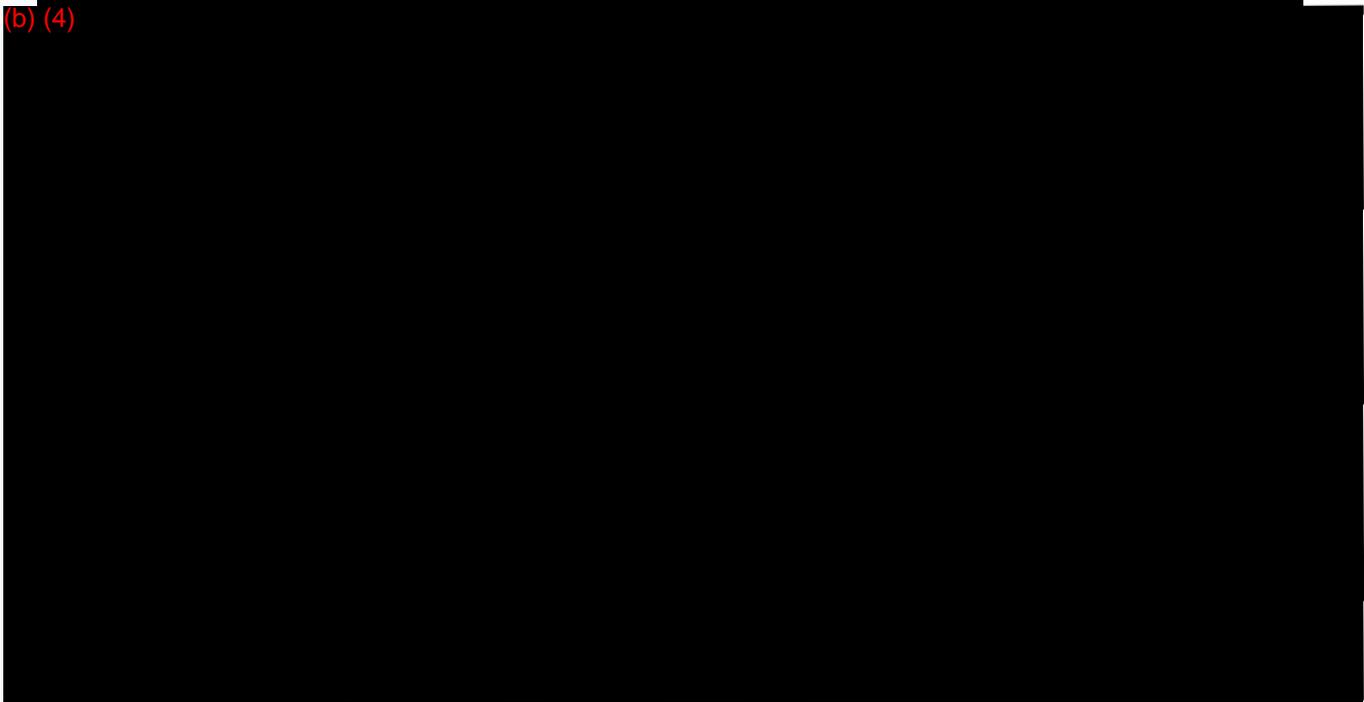
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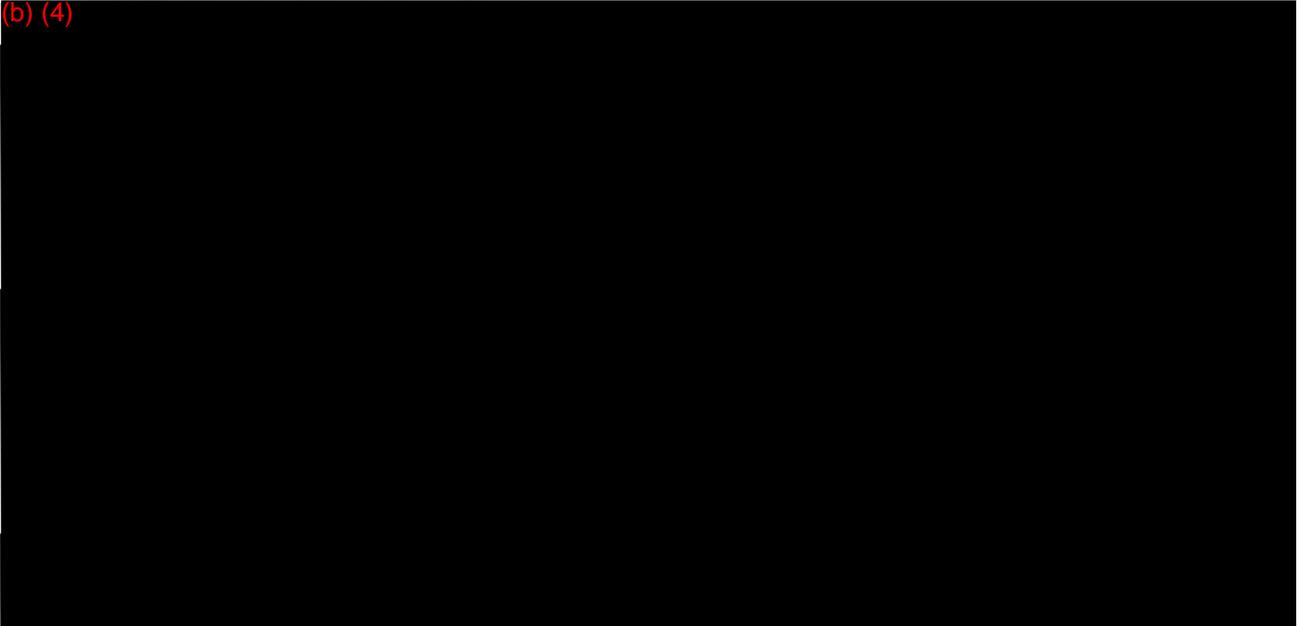
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Others who have expressed interest should additional operators be needed beyond those locally available in Arizona:

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BENEFITS TO LOCAL COMMUNITIES

Benefits to Local Communities

Along with providing healthy forests through economically viable treatments, Pioneer has aimed since inception nearly 15 years ago to provide good paying, sustainable jobs and economic activity in the community where it is located. We strive to be "good neighbors" by providing direct employment as well as opportunities for existing businesses to support us through contracting. To understand the importance of this in Arizona and near-by areas in western New Mexico, here is a synopsis of what the area has had to deal with over the last 2 decades:

Mill Closures:

<u>Mill</u>	<u>Location</u>	<u>Capacity</u>	<u>MMBF Closure Date</u>
Stone Forest Ind.	Flagstaff, AZ	75	1992
Kaibab Forest Ind.	Payson, AZ	12	1993
Precision Pine	Williams, AZ	10	1993
Kaibab Forest Ind.	Fredonia, AZ	65	1994
Precision Pine	Eagar, AZ	8	1996
Navajo Forest products	Navajo, NM	25	Mid 1990's
Jicarilla Forest Products	Dulce NM	10	Mid 1990's
Precision Pine	Winslow, AZ	22	1998
Stone Forest Ind.	Eagar, AZ	65	1998
Stone Forest Ind.	Snowflake, AZ	640 M Tons	1999
FATCO	Cibecue, AZ	15	2004
Western Renewable Energy	Eagar, AZ	26 M Tons	2006
Reidhead Bros.	Nutrioso, AZ	7	2007
Chama Sawmill	Chama, NM	10	Mid 1980's
<i>Mills Closed Since 1992</i>	<i>Total Capacity:</i>	<i>314 MMBF sawtimber plus 665 Tons of pulp</i>	

All this has led to high unemployment rates in communities formerly relying on forest treatments and wood processing for a significant part of their economy.

Employment and Economic Benefits of Pioneers Proposal:

Pioneer has for some years been seeking the most economical way to address the problem, as stated by the Western Forestry Leadership Coalition, of "The cost of reducing fuel loads continues to be prohibitive in locations where timber prices are low or the product itself is not marketable." While some of the products of forest restoration have current markets in Arizona, the large majority coming from smaller trees has no facilities available to provide adequate value to cover the cost of treatments.

Through extensive visits to Scandinavian and other European countries, Pioneer has found technology and strategies that do just that. The milling technology Pioneer will utilize at its' mill will make it one of the most up-to-date wood processing facilities in the world. Pioneer will be one of few locations where raw logs will go all the way to finished products all in the same location. The first step, primary manufacture, will take the logs to sawn, dried lumber. In phase II, this lumber will be finger-jointed and reconstructed into 4' X 8' panels in different thicknesses. These panels are an industry standard that currently is most often then sold into the finished products market for things such as molding, furniture parts, doors, door frames, cabinet doors

and even furniture. Pioneer's third phase of operation will be to turn these panels to such products at our Northern Arizona location.

The influx of trees over the last century leaves forests with a dearth of excess trees in the small to mid-size ranges, with only a relatively small percentage of the trees needing removal in size classes greater than 16" in diameter at breast height. (Four Forest Restoration Initiative, *Old Growth Protection and Large Tree Retention Strategy*, March 2011, plus Forest Service RFP).

The utilization of our 3-phase process to produce final products will enable using these small trees, plus maximize employment in the local community. Rather than just primary manufacture with lumber or other products going elsewhere for follow-up processing, and taking those jobs with it, Pioneer will do all that with local Northern Arizona employment. This is what is unique about Pioneer's proposal in terms of economic impact. Phase I, or sawmilling and drying, is often all that is provided at a location near the source of wood fiber. This provides some manufacturing jobs. In Phase II, Pioneer will re-cut these boards, often cutting out knots for achieving higher-grade, clear material, and finger-jointing them together to form panels of various grades and sizes, starting with 4' by 8' panels in 3 thicknesses. This finger-jointing process will again provide considerable employment not provided in primary manufacture. In Phase III, Pioneer will process the 4' by 8' panels into consumer ready products such as cupboard doors, furniture parts, door jambs, and eventually into our own line of furniture. Again, more employment is provided in phase III.

Finally, for the sapwood only, Pioneer will add a densification process that basically turns the pine into hardwood, mimicking such thing as walnut, hickory or mahogany. This can be used in things such as flooring where softwoods such as pine cannot normally be used. Again, this provides additional employment.

The furniture line and the densification will take longer to develop, but the first phase milling will begin just about 11 months after start-up of construction. Phase II, or the finger-jointing, will be operational about 7 months later and Phase III shortly after that.

Workforce

Pioneer's mill does not require a labor force that is highly skilled as a starting point. Finger-jointing operations are distinctly different from other mills, due to increased quality expectations, different equipment and processing objectives, consequently requiring individualized training. Pioneer will provide this through a combination of on-site training done by our equipment suppliers and by sending individuals to off-site training as needed. Thus Pioneer will be able to maximize the employment of local residents in the area, rather than bringing in many highly specialized personnel from outside because of their training and/or experience. The workforce will be involved in operation of state-of-the-art mill equipment, harvesting, trucking, equipment operators, electrical and general maintenance, product research, human resource, administration, product promotion and sales.

In addition to the products as described, Pioneer's proposed manufacturing activity creates a mill waste of significant value. Green waste (high moisture content) combined with dry planer chips and sawdust will go to Pioneer's kiln drying operation. Excess mill waste plus forest waste will be going to our biomass partner for energy production. This facility alone will likely provide employment for nearly 80 people.

Without the development of Pioneer's last two steps of furniture and densification, Mill employment in Pioneer's facility will be approximately 380 FTE. Add to this, the logger's and biomass plant workers and truckers employed bringing the material to the mills, and you have direct employment of at least 550 FTE's.

Since local logging contractors may not have the capacity to meet Pioneer's needs for this 4-FRI Contract (see Performance Work Statement for details), it may become necessary to bring in outside operators. If and when this happens, Pioneer will see that they hire most of their labor from Arizona.

Pioneer's staff foresters, in conjunction with the 4-FRI Collaborative Group, The Northern Arizona Wood Products Association (NAWPA) and likely a local Community College, will develop needed training programs in different areas of work to assure that the diverse fields of work are covered. This will cover things such as logging, stewardship work, maintenance, road work and transportation of logs and biomass, not the specialized mill jobs mentioned earlier.

Finished products made from softwood such as panels, doors, cabinets, furniture and furniture parts was largely coming from overseas, exacerbating the employment downfall in many communities. This has added to job losses, not only in direct logging and milling but in considerable opportunities in the re-manufacture of boards into cabinets and other finished products. The Process PIONEER has created will stem much of the job loss across Northern Arizona, providing extensive opportunity for employment in logging, trucking, log breakdown, and finally production of edge-glued panels and many finished products.

According to Yeon-Su Kim, 2011, 905 direct, indirect and induced jobs will be created in Coconino and Navajo Counties from Pioneer's planned operation. During the Construction phase, 364 Jobs would be created starting in Month one of Operations. (Per White Paper: Regional Economic Impacts of Pioneer Associates, LTD., by Yeon-Su Kim of Northern Arizona University. (See Kim Paper in Appendix).

(Since Kim ran the model in April, 2011, our estimates of direct employment in both the finger-jointing operation and the biomass to energy operation have increased, raising the total direct employment by some 10 percent. This would in turn raise total employment by about the same percentage.)

The facility construction jobs would phase in over months 7 to 10, then would taper off starting in month 18. Logging jobs would start on a small, testing and training scale, in month 1 of Operations, and would escalate along with mill operation jobs in Operations Month 6.

Some jobs would also be created in adjoining counties, and with the high level of employment in Coconino and Navajo Counties could go a long way toward replacing the job losses associated with the mill closures shown above.

Economic Benefits

When in operation the total economic benefits of Pioneer's operation to Coconino and Navajo Counties will be \$157 million, \$47 million in labor income and \$4.5 million of business taxes. Total tax benefit including local, state and federal will be \$12.7 million. This will be spread through many sectors of the local economy, see Kim letter in Appendix for details.

APPENDICES

Regional Economic Impacts of Pioneer Associates, LTD.

Prepared by: Yeon-Su Kim¹ for: Pioneer Associates, LTD.

March 25, 2011

Summary: The construction of the proposed facility will generate some \$57 million of economic output, \$18 million of labor income and 364 jobs. Once operations are up and running, total output of \$157 million will be annually generated in Coconino and Navajo counties in Arizona, along with \$41 million of labor income and over 900 jobs.

This report is to determine the economic impacts that would result from Pioneer Associates' planned wood products manufacturing facility in Northern Arizona. I used an Input-output (I-O) model using IMPLAN (Impact Analysis for Planning) to analyze the economic impacts. The study was based upon estimates and data reported by Pioneer Associates, LTD. The forecasts were begun with an assumed or estimated parameter. The information provided by Pioneer Associates was taken as datum. I-O modeling measures the impacts on regional economic characteristics and other industries that result from the creation of a new business. Here I closely followed the methodology used in a previous report². For the detailed discussion about the methods, please see Hjerpe and Gunderson (2007). To represent the economic impacts for the most affected regions, I defined the economic area of Pioneer Associates, LTD. most conservatively as Coconino and Navajo Counties of Arizona.

The economic impacts of various wood products production were broken into two categories: the recurring annual impacts associated with harvesting and facility operations and the one-time impacts associated with the construction of the facility. The annual impacts were further categorized into annual tree harvesting operations, annual facility operations, and annual biomass power generation. Table 1 below summarizes the overall impacts in terms of output, employment, and labor in the area when the facility is in full operation.

Table 1. Annual Effects¹ of Pioneer Associates Manufacturing Facility Operation.

Impact Type	Employment (FTE)	Labor Income ²	Output
Direct Effect	521	\$27,238,374	\$113,322,810
Indirect Effect	214	\$7,068,167	\$25,453,306
Induced Effect	169	\$6,310,310	\$18,220,109
Total Effect	905	\$40,616,851	\$156,996,225

¹Effects are presented in 2011 dollars.

²Total labor income includes employee compensation and proprietor income.

Table 2 shows the most affected industries and total employment, labor income and output (includes indirect and induced output) resulting from the demand created by Pioneer Associates' tree harvesting, manufacturing facility operation and biomass power generation.

¹ School of Forestry, Northern Arizona University, Email: ysk@nau.edu

² Hjerpe, E.E. and R. Gunderson. 2007. Impact analysis of Arizona Forest Restoration Products' oriented strand board facility. A report from Northern Arizona W. A. Franke College of Business Center for Business Outreach

Table 2. Top Ten Affected Industrial Sectors by Employment (FTE)

Description	Employment	Labor Income	Output
Commercial logging (16)	207	2,822,554	18,176,627
Wood windows/doors/millwork manufacturing (99)	80	3,750,896	13,778,270
Transport by truck (335)	65	3,023,488	8,856,112
Sawmills/wood preservation (95)	52	2,592,873	12,507,061
Federal govt- non-military (439)	35	3,024,609	3,673,116
State/local govt- electric utilities (431)	34	3,758,625	20,205,746
Management of companies/enterprises (381)	33	2,470,753	5,533,644
Food services/drinking places (413)	29	659,689	1,789,844
Commercial/industrial machinery /equipment repair and maintenance(417)	28	1,473,532	2,604,323
Transport by rail (333)	26	2,896,211	10,611,514

The one-time impacts associated with the construction of the facility also represent a surge in regional economic activity. The construction of the facility will include local laborers, suppliers, fabricators, infrastructure needs, specialized labor, and raw materials. Table 3 summarizes the overall impacts for output, employment, and labor income associated with the facility construction.

Table 3. Initial Effects¹ of Pioneer Associates Manufacturing Facility Construction.

Impact Type	Employment (FTE)	Labor Income ²	Output
Direct Effect	225	12,503,375	41,802,016
Indirect Effect	62	2,643,587	7,172,089
Induced Effect	78	2,876,861	8,318,198
Total Effect	364	18,023,823	57,292,303

¹Effects are presented in 2011 dollars.

²Total labor income includes employee compensation and proprietor income.

Table 4 shows the most affected industries and their total employment, labor income and output (includes indirect and induced output) resulting from the facility construction.

Table 4. Top Ten Affected Industrial Sectors by Employment (FTE)

Description	Employment	Labor Income	Output
Construction of new nonres. manufacturing structures (35)	45	2,010,710	4,644,379
Plate work/fabricated structural product manufacturing (186)	34	2,047,561	9,605,536
Construction of other new nonres.. structures (36)	30	1,359,818	3,615,511
Architectural, engineering/related services (369)	27	1,336,123	2,716,232
Wholesale trade businesses (319)	16	866,791	2,160,751
Food services/drinking places (413)	14	322,967	876,262
Building material/garden supply (323)	14	517,117	936,167
Commercial/industrial machinery/equipment rental/leasing (365)	13	1,792,824	6,577,632
Wood windows/doors/ millwork manufacturing (99)	12	582,932	2,141,299
Waste management/ remediation services(390)	11	1,113,443	3,399,480

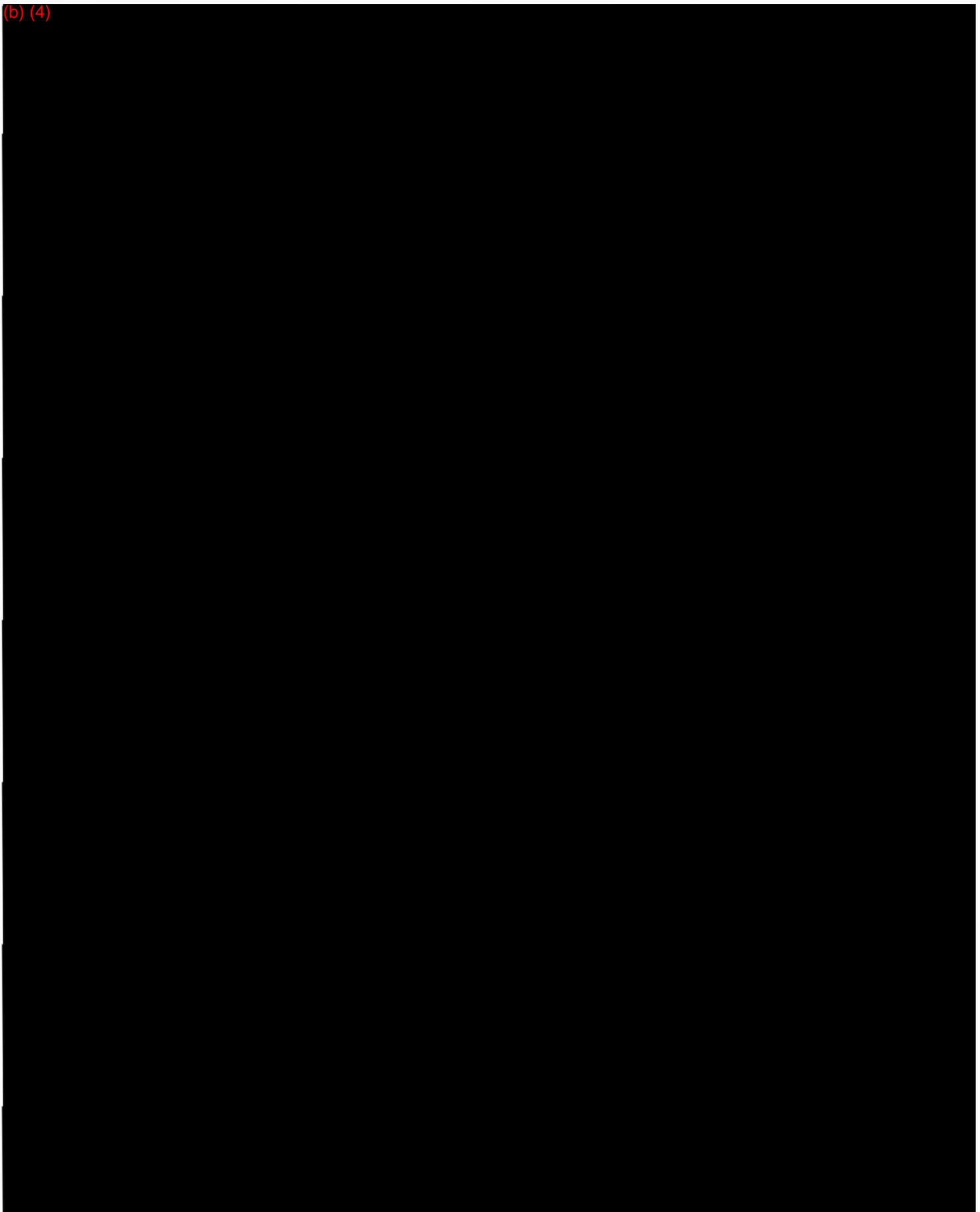
The construction of the proposed facility will generate some \$57 million of economic output, \$18 million of labor income and 364 jobs. Once operations are up and running, total output of \$157 million will be annually generated in Coconino and Navajo counties in Arizona, along with \$41 million of labor income and over 900 jobs.

Other main economic impacts include:

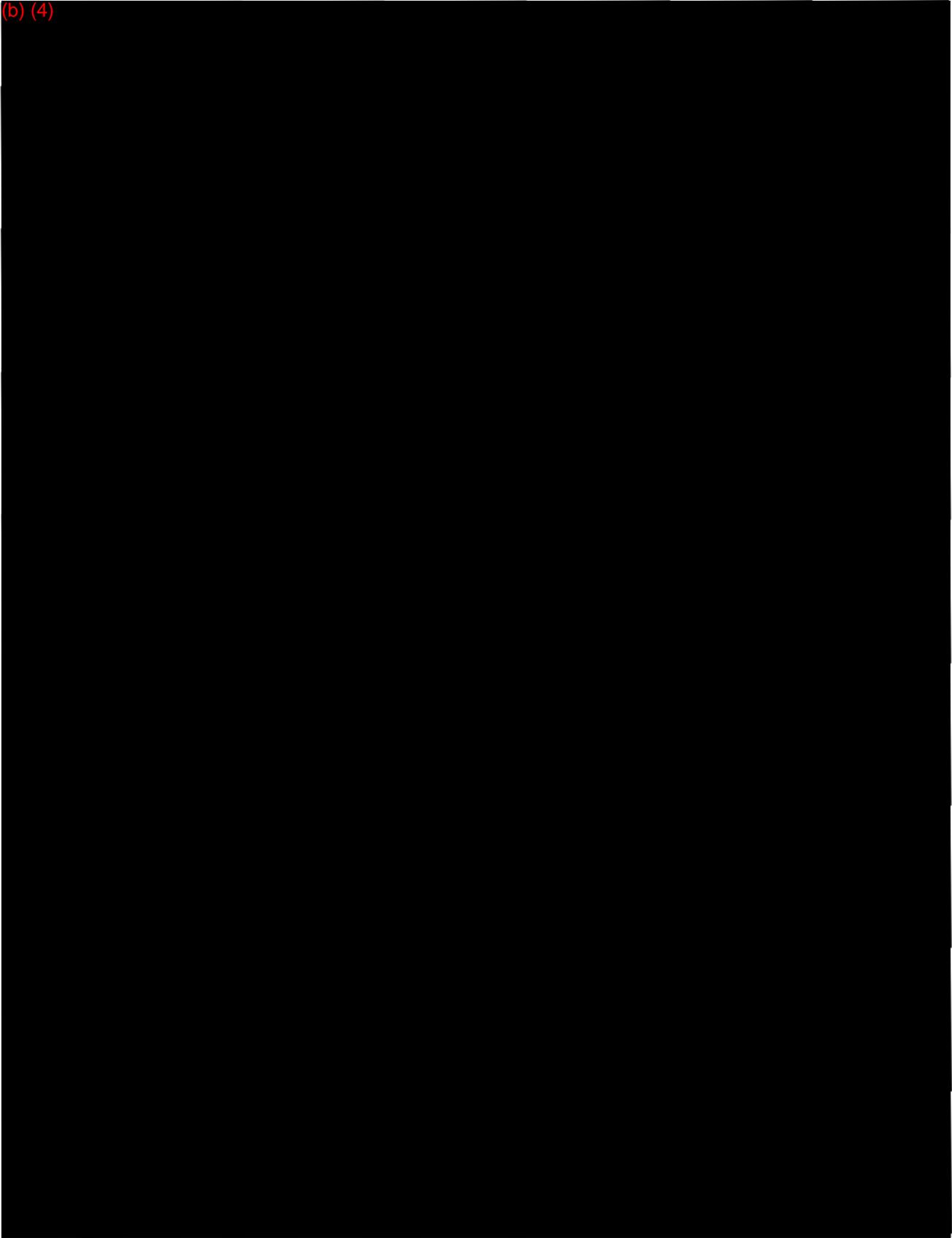
- Annual operation of the Pioneer Associates, LTD will generate some \$2.5 million of indirect business taxes³ stemming from direct effects. Total effects, including indirect and induced effects, will generate approximately \$4.5 million of indirect business taxes.
- Facility construction will generate an estimated \$1.3 million in indirect business taxes from direct effects and \$2.1 million from total effects.
- Total tax impacts, including local, state, and federal, will be \$12.7 million for annual production and \$5.5 million for facility construction.

³ Indirect Business Tax includes taxes on sales, property, and production, but it excludes employer contributions for social insurance and taxes on income.

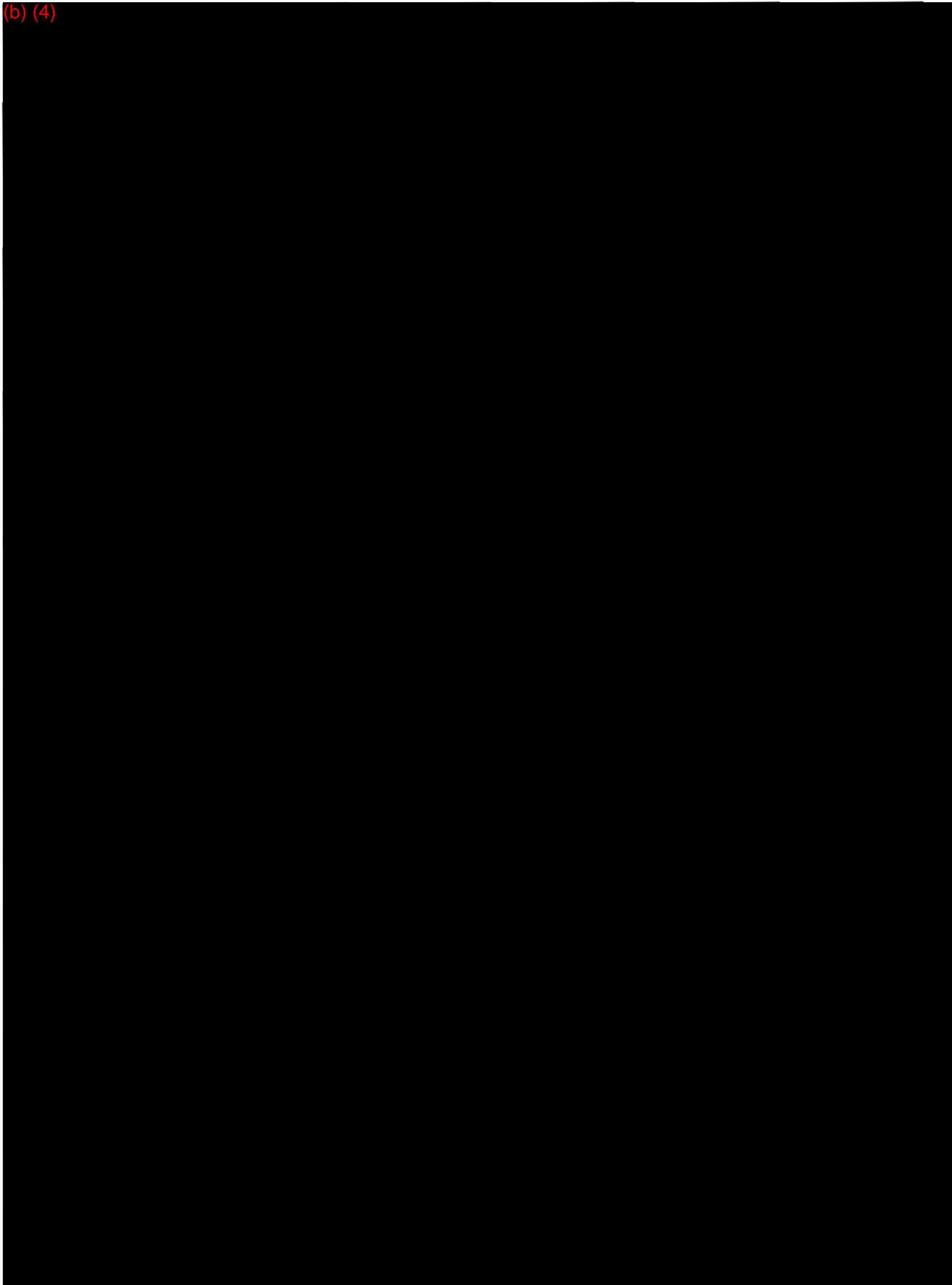
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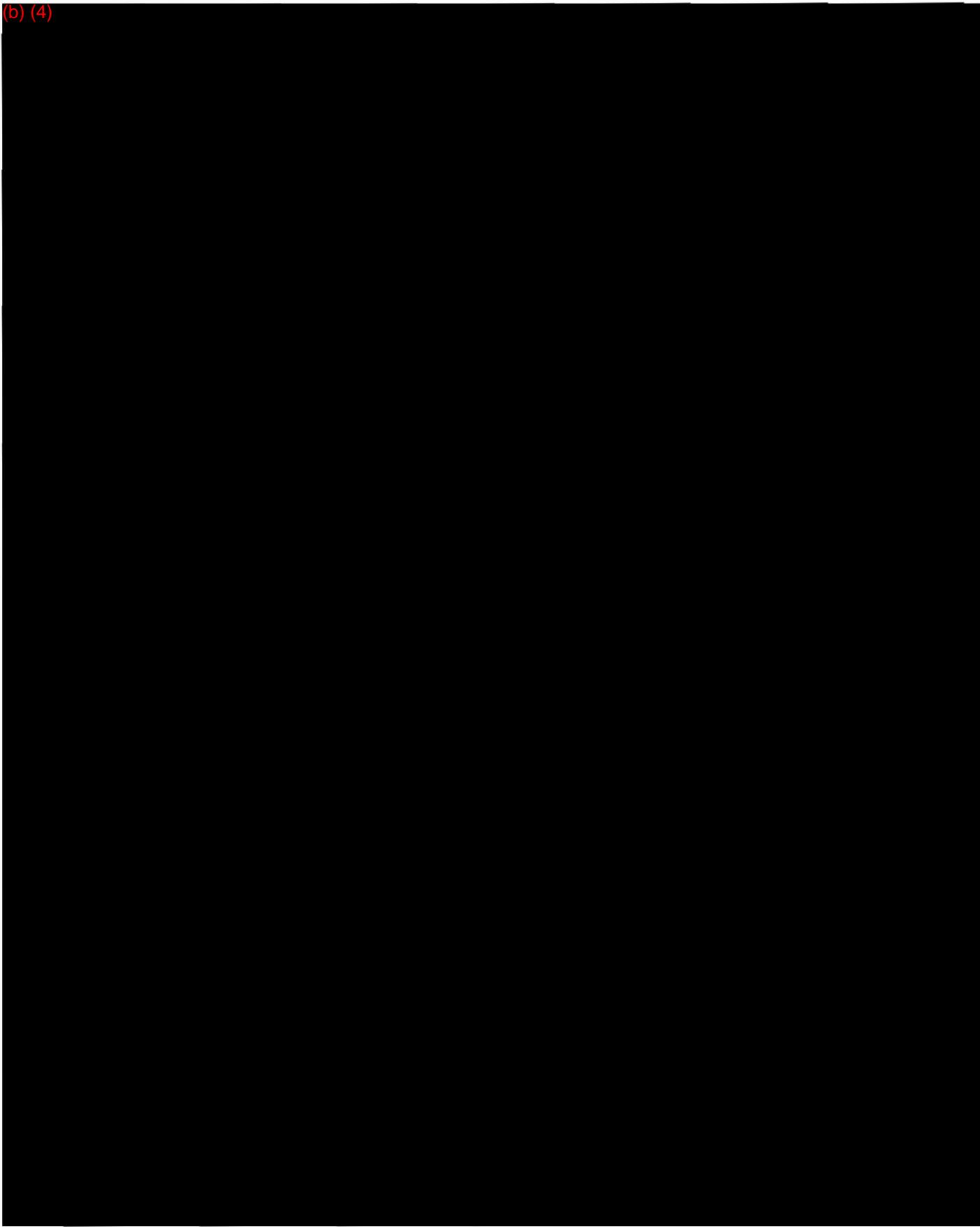
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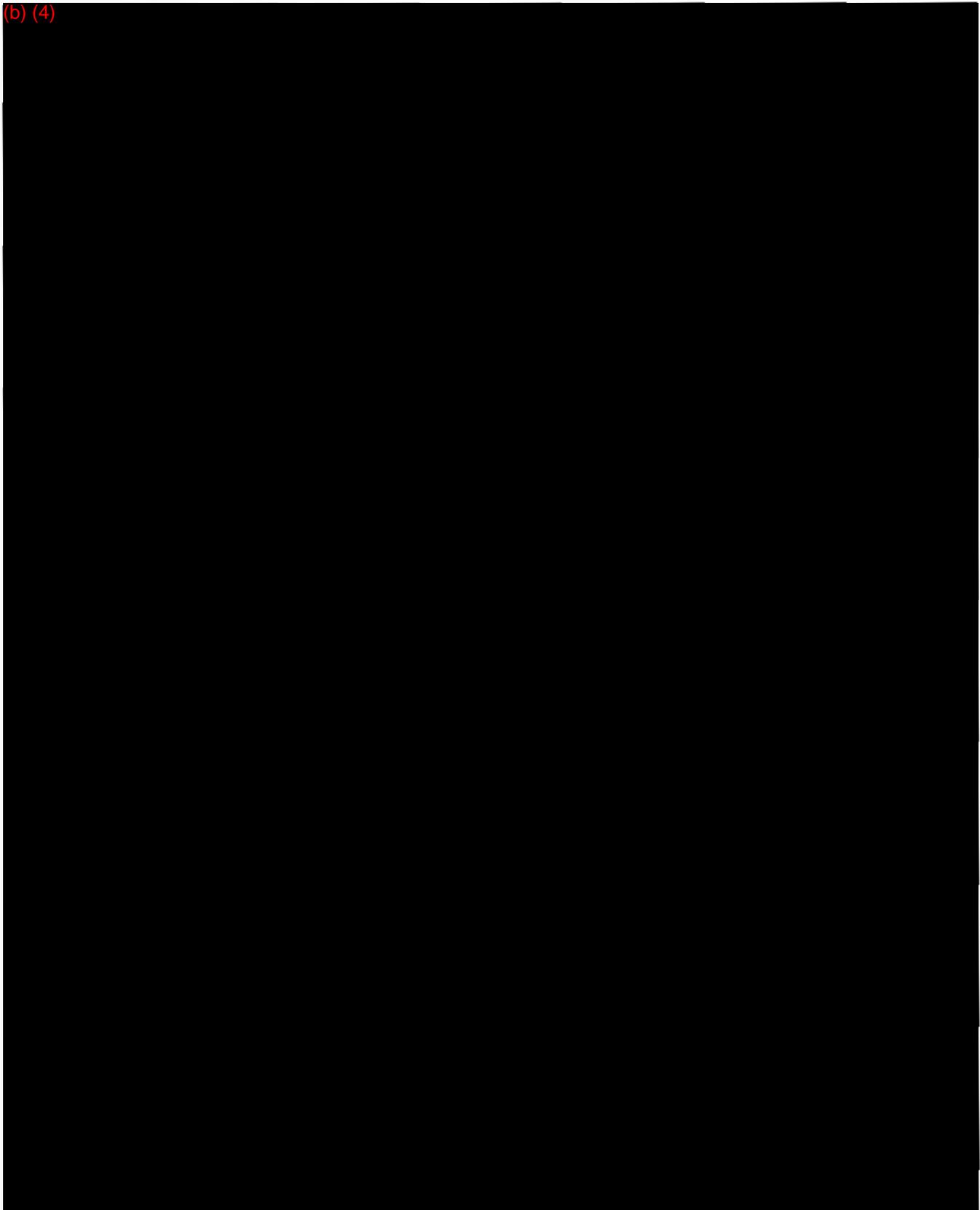
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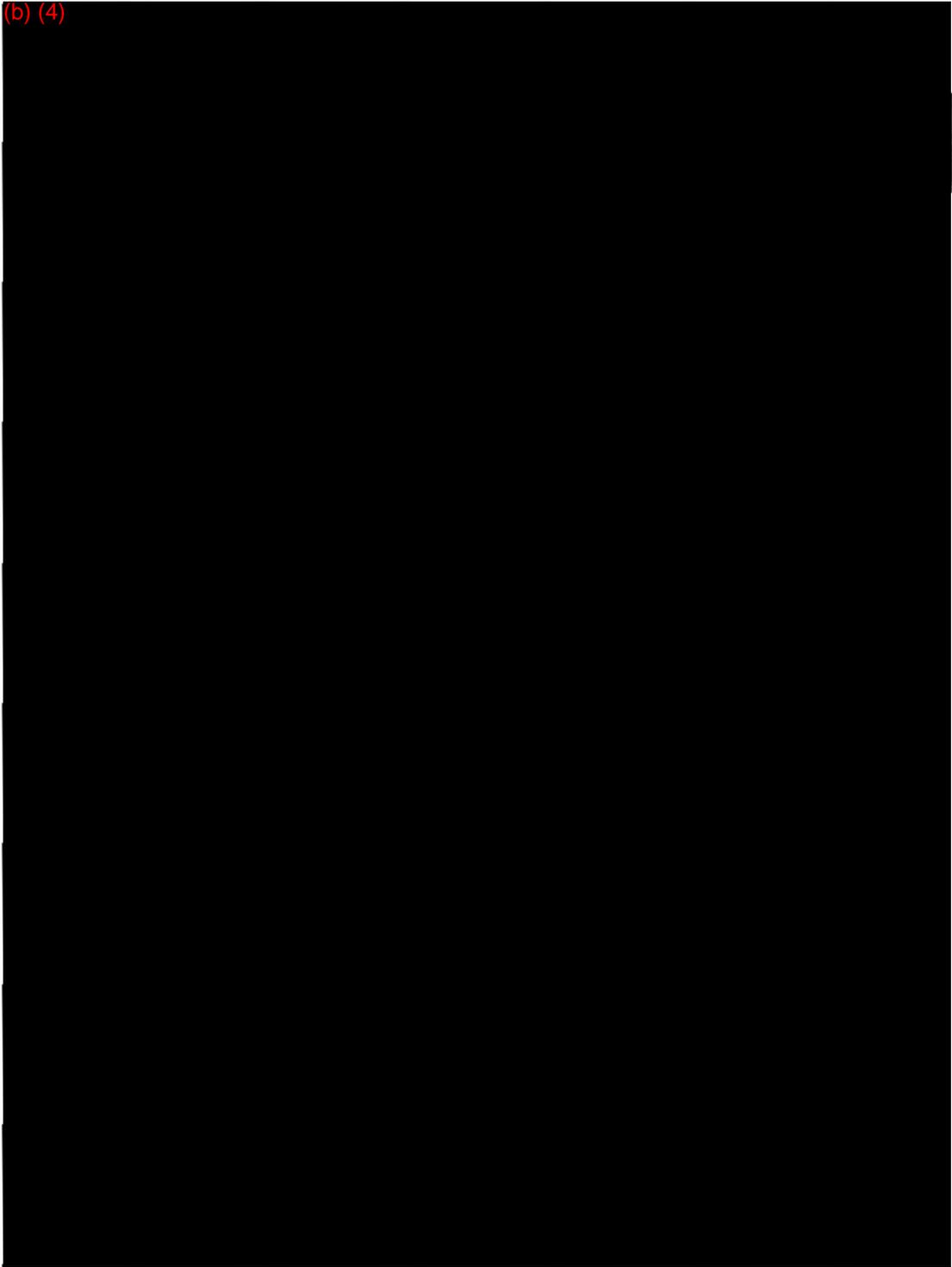
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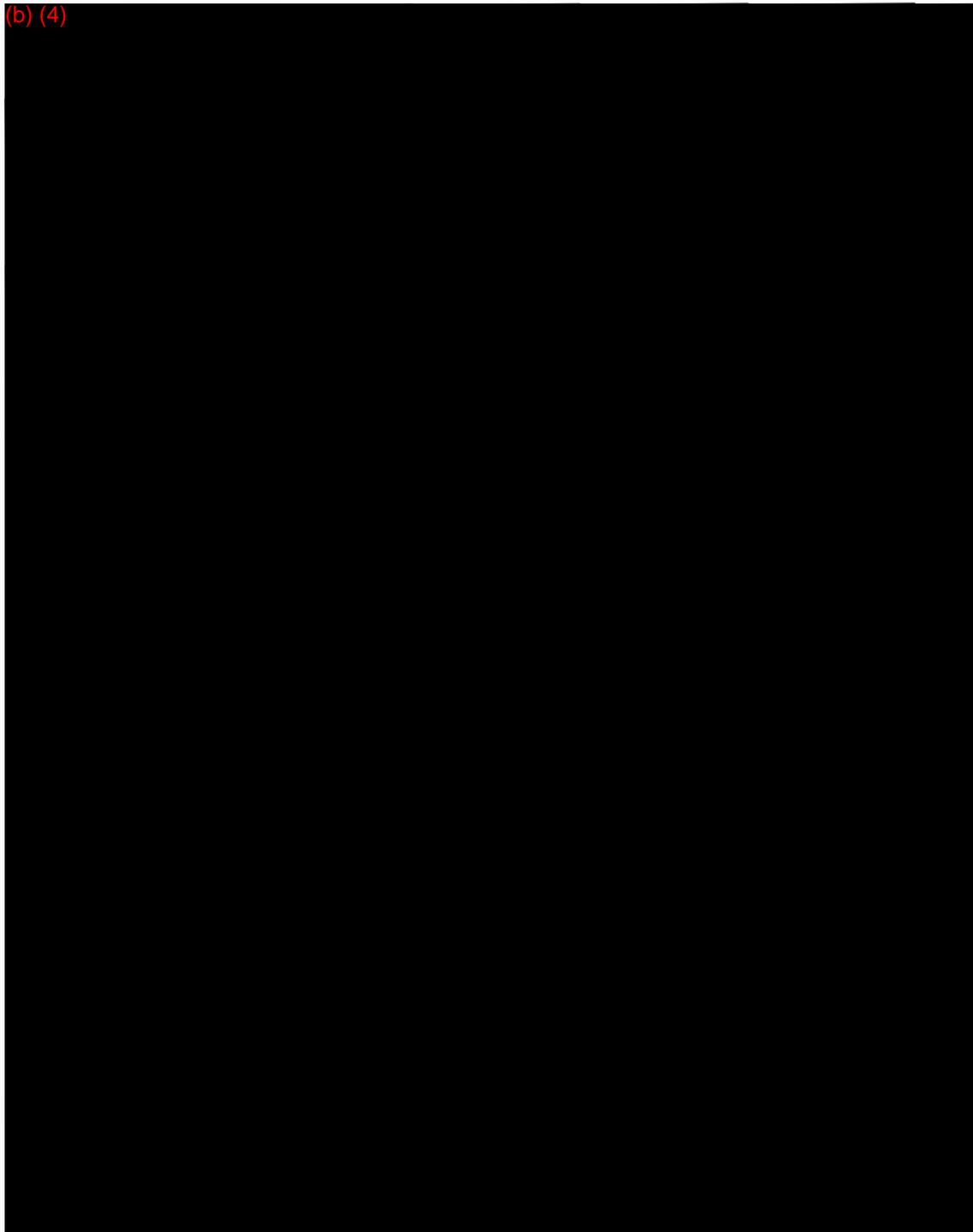
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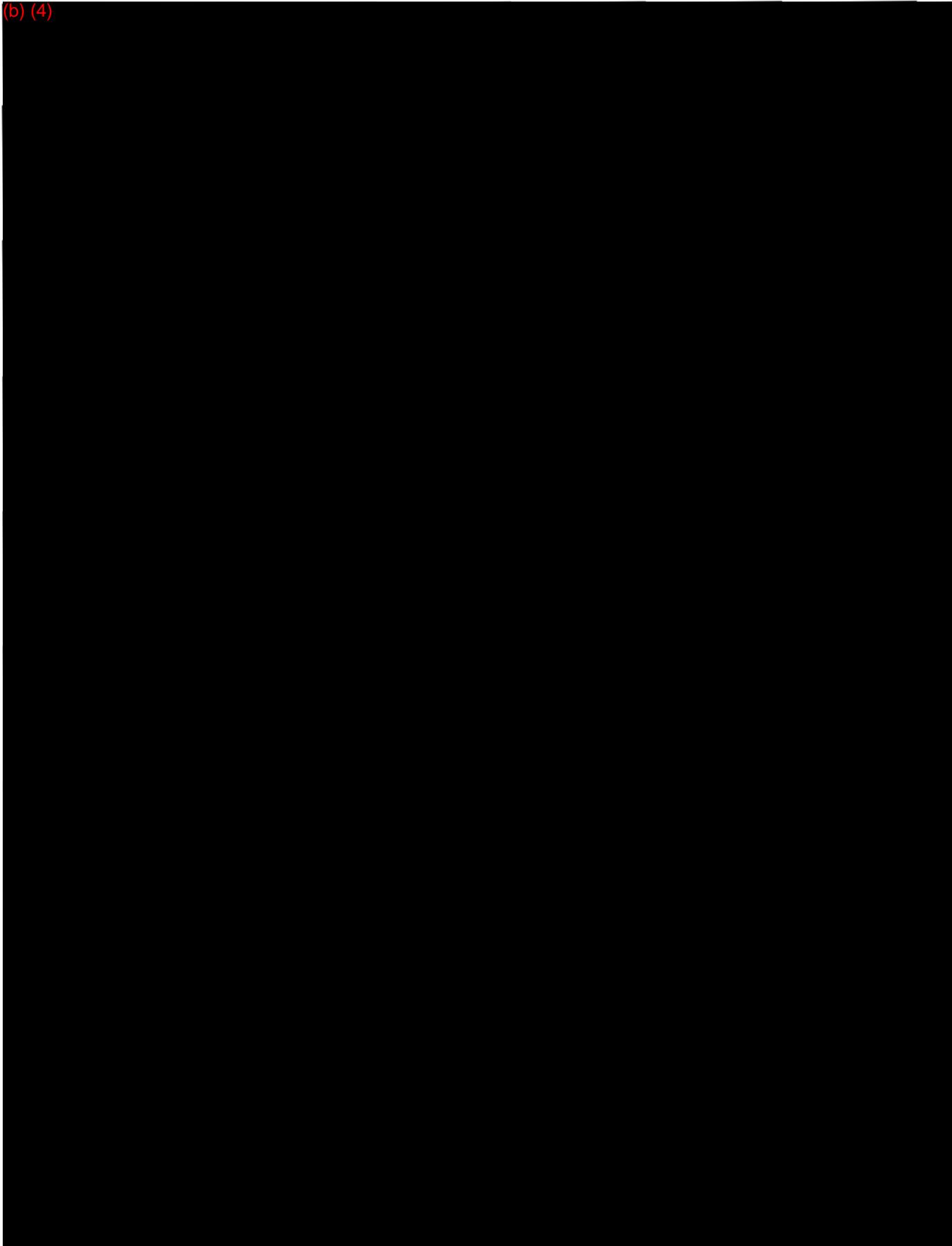
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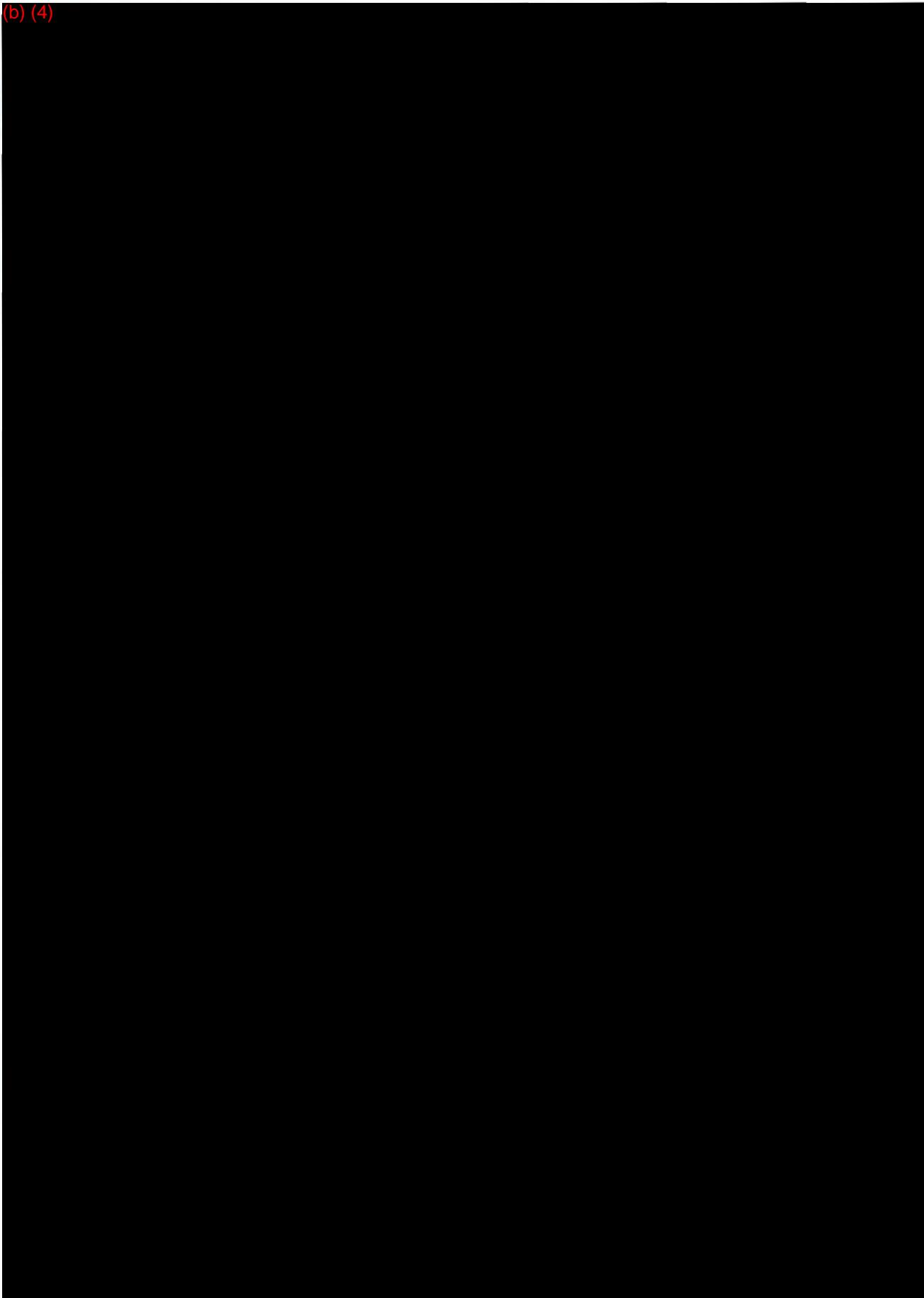
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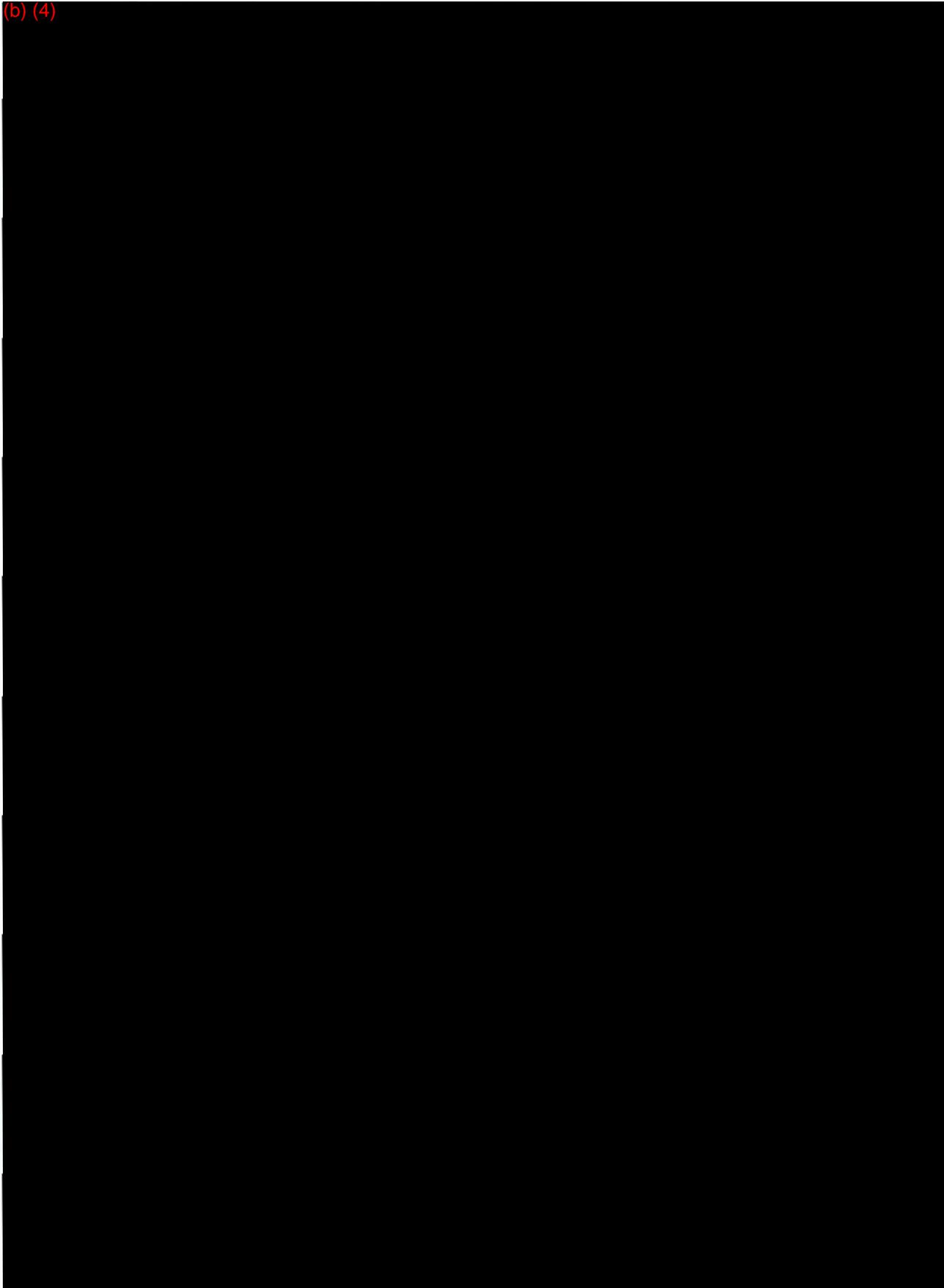
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PIONEER FOREST PRODUCTS CORPORATION

SAFETY PLAN

Below is a general Safety Plan Pioneer trains and requires its employees to follow. A more specific Safety Plan will be provided with each Task Order awarded to provide for greater detail of job hazards and operational safety.

GENERAL REQUIREMENTS

A. POLICY

It is the policy of Pioneer Forest Products Corp. (Hereinafter Pioneer) to ensure all employees a safe and healthy environment, meeting all State and Federal Regulations at the job site.

B. SAFETY PERSONNEL

It will be the responsibility of Pioneer Safety Administrator to administer the safety program.

C. SUBCONTRACTORS SAFETY

It will be the responsibility of the Pioneer Safety Administrator and Superintendent to ensure Subcontractor compliance to all Safety and Health regulations at the job site.

D. SAFETY INSPECTION

The on-site Safety Administrator will conduct a daily safety inspection of the work sites, materials and equipment. This inspection will be made a part of the daily log kept on the job site. It will also be the responsibility of the Foreman and each worker to inspect his/her workplace for safety, prior to starting any work. Any safety violations reported will be corrected immediately to ensure the safety of the construction site.

E. COMMUNICATION

All logging operations including sub-contractors are required to maintain radio Contact with Pioneer from their field sites.

F. ACCIDENT REPORTING

All accidents (personnel and property damage) will be reported immediately to the Contractors Safety Administrator. Once emergency conditions no longer exist, the Contractor will notify the jobsite representative. Injuries, except for first aid cases, will be reported on WP form 1462 to Health Services and Industrial Safety. Property Damage exceeding \$2,500 will also be reported to the Contracting officer representative. The Contractor will report the total monthly man-hours of exposure to the appropriate safety designee.

G. SERIOUS AND FATAL INJURIES

All serious and fatal injuries will be reported immediately to the Construction Superintendent and the Contracting Officer. The on-site Safety Administrator will submit a comprehensive narrative report complete with witness statements of the incident. All personnel will assist and cooperate fully with the Contracting Officer in conducting factual accident investigations. All information and data pertinent to the investigation of an accident will be made available to the Contracting Officer. In the event of a fatal accident, except for rescue and emergency measures, the scene of the accident will not be disturbed or operations resumed until authorized by the Contracting Officer.

H. ACCIDENT POTENTIAL

Any accidental occurrences with serious potential such as major equipment failures, contact with high voltage lines, exposure to hazardous materials, etc., will be reported immediately to the on-site Safety Administrator, Construction Superintendent and notification made to the Contracting Officer.

I. HOUSEKEEPING

- 1) Mobile Office (when applicable): Will be kept clean and swept of all debris. The floor will be kept in such a manner that all boxes, files, etc., will not be obstacles in the pathway of normal operations. All papers and reports will be kept in a file cabinet and desktops maintained in an orderly manner. Waste baskets will be lined with plastic liners and contents of such disposed of in prescribed location designated by the Contracting Officer. Smoking will be limited to designated areas outside the building. All work areas shall be maintained in a neat and orderly fashion with trash and debris removed on a regular basis.
- 2) Construction Site: All work areas will be kept as clean as possible during work hours and in addition, will be cleaned up thoroughly at the end of each work shift.

J. EMPLOYEE FATIGUE

Pioneer will require equipment operators to adhere to all standards for work/rest periods. We will strive to provide consistent full-time employment to individuals while allowing adequate work/rest periods and days off to assure

fatigue does not become a factor leading to accidents. Following these will improve safety for all operations in completion of this contract.

K. DISPOSAL OF MATERIALS

Disposal of all materials including waste, trash, garbage, etc., will be in accordance with Federal, State and local regulations.

L. OFFICE AND STORAGE AREA

The area surrounding the mobile office and storage area will be kept in a neat and orderly manner. There will be no trash, boxes, small tools, etc., kept under or around the mobile office. Materials and tools will be stored in storage areas or buildings. Easy and safe access to the equipment will be maintained.

M. STORAGE AREA

All loose materials and trash will be picked up daily and disposed of in a proper container or trash bags and disposed of as designate by the Contracting Officer. All Subcontractors are responsible for picking up all trash and materials left from their work for that day. The on-site Safety Administrator and General Foreman will be responsible for the appearance of the storage area and will encourage subcontractors to police their work area.

MEDICAL NEEDS

A. MEDICAL CARE

[Nearest Hospital and Location] has been identified for potential use of their facilities. They have their staff doctors available [Hours of Operation] for all medical treatment required. The telephone number is [Hospital Phone Number].

B. ACKNOWLEDGMENT OF REGULATIONS AND PROCEDURES

Every new employee will be issued the provisions of the Contractors safety program. Each employee shall acknowledge receipt of these instructions by his signature and each acknowledgment shall be put on file. Refer to form A-1 in back of manual. The Job Hazard Analysis (JHA) will be reviewed with each employee pertaining to his job and the work area. New employees will have a "Safety Orientation" meeting prior to performing any work.

C. SAFETY MEETINGS

A weekly "tool box" safety meeting will be conducted by the Safety Administrator and will be attended by all employees under his supervision. A review of the Job Hazard Analysis (JHA) will be made of the previous week's work. Monthly meetings for all levels of job supervision will be conducted to insure maximum safety compliance. Employees will have a pre-work safety meeting.

D. AMBULANCE SERVICE

The ambulance service operated by [Name of Ambulance Service] is available 24 hours a day through the Emergency Line. The telephone number for site emergency is [Emergency Phone Number] and will be posted on the telephone to insure instant notification to the service.

E. FIRST-AID TREATMENT

An approved first-aid kit is provided and located in the mobile office on the construction site. The on-site Administrator will be certified to administer first aid as required.

F. FIRST-AID AND MEDICAL RECORDS

A daily treatment log is made part of the daily log maintained by the on-site Safety Administrator. Cumulative individual injury records will be maintained on employees.

EMERGENCY PLANS

A. INJURY OR ILLNESS

The Emergency Hot Line, [Emergency Phone Number] will be contacted and a request made for the Ambulance Service, along with the description of the injury or illness. The on-site Supervisor will appoint persons to direct the ambulance to the location of the injury or illness. If applicable, first aid and/or CPR will be administered until the ambulance arrives.

B. FIRE

The Emergency Hot Line, [Emergency Phone Number] will be contacted and fire fighting equipment requested. All employees will remove themselves from the danger area and will not jeopardize themselves in containing the fire. Fire extinguishers are located in the mobile office and on the construction site for small fires. The on-site supervisor will appoint persons to direct the fire truck to the location of the incident.

C. SHERIFF'S DEPARTMENT

In the event that there is a need for the police, the Emergency Hot Line, [Emergency Phone Number] will be contacted and help requested. It will be necessary to describe the situation that requires the authorities. The Construction Site Security will respond and if necessary will contact the Sheriff's Department or State Police.

OCCUPATIONAL HEALTH

A. DRINKING WATER

A water dispenser is provided on site within company vehicles.

B. TOILET FACILITIES

No toilet facilities will be available for this contract unless found necessary due to close proximity to habitations or high-use public areas.

C. GARBAGE

Will be kept in closed fly-tight containers and disposed as needed in a designated area in a manner approved by the Contracting Officer.

B. SNAKES

Protection from exposure to snakes shall include the wearing of boots to eliminate or reduce the hazard of snakebites

PERSONAL PROTECTIVE EQUIPMENT

A. HEAD PROTECTION

Construction employees, supervisors, superintendents, manufacturer's representatives and visitors shall wear protective helmets of the type specified whenever overhead hazards exist. These areas will be designated at "HARD HAT AREAS".

B. POSTING OF HARD HAT AREA

A sign will be erected at the entrance to designated hardhat Areas. Thinning contractor shall comply with existing safety equipment policies.

C. EYE AND FACE PROTECTION

Employees exposed to potential eye or face injury from physical or chemical agents shall be required to wear eye and/or face protection. The employer shall furnish the protective equipment. Protective goggles or face shields that can be worn over corrective glasses will be provided to employees whose vision requires the use of corrective lenses. Construction contractor shall comply with existing safety equipment policies.

D. FOOT PROTECTION

Protective footwear including boots shall be suitable for the conditions and comply with ANSI standards. Oxfords, sandals, canvas, tennis or deck shoes are not acceptable for construction work. Thinning contractor shall comply with existing safety equipment policies.

E. MINIMUM CLOTHING

All employees will wear as minimum protection, full-length pants and short sleeve or T-shirt. Cut offs, tank tops or modified shirts etc., are not acceptable wearing apparel.

FIRE PREVENTION AND PROTECTION

A. WARNING SIGNS

Readily visible signs prohibiting smoking and open flames shall be posted where a fire or explosion hazard exists.

B. FIRE CODES

The contractor shall comply with the requirements published in the current revisions of the National Electrical Code and the National Fire Protection Association standards and all related and applicable Fire Protection requirements.

C. SMOKING

Cigarette smoking or other sources of ignition shall not be permitted in areas where flammable or explosive materials are stored or present. All flammable materials shall be stored in appropriate containers and cabinets. Smoking shall not be permitted where danger of starting fires may exist. In cases where there may be danger of starting wildfires, smoking will only be allowed in enclosed vehicle or buildings.

D. FLAMMABLE MATERIAL

All materials will be stored away from flammable materials. All flammable material shall be properly labeled and stored in appropriate containers and cabinets.

E. FIRE EXTINGUISHER AND FIRE TOOL BOX

Appropriate fire extinguishers and shovels will be provided as required. A fire tool box will be maintained on all work sites equipped with specified tools adequate for the workforce present and to meet or exceed the standards provided by the USFS for fire tool boxes. They will be strategically located, marked and readily available. Clear access to fire extinguishers and fire fighting equipment will be maintained.

F. FUELING INTERNAL COMBUSTION ENGINES

Internal combustion engines shall be switched off before refueling if the fuel tanks are integral parts of the equipment.

MATERIAL HANDLING, STORAGE AND DISPOSAL

A. STORAGE ROOM (if applicable)

Materials and tools shall be stored in a planned and orderly manner to preserve the safety of employees. Materials shall not be placed in the doorway or obstruct access into or out of the room.

MOTOR VEHICLES AND MECHANIZED EQUIPMENT

A. OPERATING RULES

Only qualified operators will be allowed to operate the equipment. A written record of their qualification will be kept on file. No vehicle will be left running, unattended. Drivers and operators must adhere to the maximum 30-mph speed limit and shall park in authorized areas only.

B. INSPECTION

Vehicles and mobile mechanized equipment shall be inspected at the beginning of each day to ensure that the equipment is in good safe operating condition. Vehicles or equipment in need of repair will be tagged "out of service". Defective equipment will be repaired, replaced or taken off site.

C. ROLL OVER PROTECTION STRUCTURES (ROPS)

Roll over protective structures shall be required on material handling equipment. Such installation shall be in accordance with the manufacturer's recommendations.

D. OPERATOR'S STATIONS

If windows are provided in operators' stations of self-propelled mobile equipment, the windows shall be made of safety glass or material with equivalent safety characteristics. The windows shall be maintained to provide visibility for safe operation.

If damaged windows obscure visibility necessary for safe operation, or create a hazard to the equipment operator; the windows shall be replaced if absence of a window would expose the operator to hazardous environmental conditions that would affect the ability of the operator to safely operate the equipment.

The operators' stations of self-propelled mobile equipment shall be free of materials that could create a hazard to persons by impairing the safe operation of the equipment and not be modified, in a manner that obscures visibility necessary for safe operation.

E. TIRE REPAIRS

Before a tire is removed from a vehicle for repair, the valve core shall be partially removed to allow for gradual deflation and then removed. During deflation, to the extent possible, persons shall stand outside of the potential trajectory of the lock ring of a multi-piece wheel rim.

To prevent injury from wheel rims during tire inflation, one of the following shall be used.

- A wheel cage or other restraining device that will constrain all wheel rim components during an explosive separation of a multi-piece wheel rim, or during the sudden release of contained air in a single piece rim wheel.

- A stand-off inflation device which permits persons to stand outside of the potential trajectory of wheel components.

F. REPAIRS OR MAINTENANCE OF EQUIPMENT

Repairs or maintenance of machinery or equipment shall be performed only after the power is off, and the machinery or equipment blocked against hazardous motion. Machinery or equipment motion or activation is permitted to the extent that adjustments or testing cannot be performed without motion or activation, provided that persons are effectively protected from hazardous motion.

G. BRAKES

Self-propelled mobile equipment shall be equipped with a service brake system capable of stopping and holding the equipment with its typical load on the maximum grade it travels. This standard does not apply to equipment that is not originally equipped with brakes unless the manner in which the equipment is being operated requires the use of brakes for safe operation.

If equipped on self-propelled mobile equipment, parking brakes shall be capable of holding the equipment with its typical load on the maximum grade it travels.

All braking systems installed on the equipment shall be maintained in functional condition.

TESTING BRAKES

Service brake tests shall be conducted when an MSHA inspector has reasonable cause to believe that the service brake system does not function as required, unless the operator removes the equipment from service for the appropriate repair. The performance of the service brakes shall be evaluated according to Table M-1 30 CFR Manual. Service brake tests shall be conducted under the direction of the operator in cooperation with and according to the instructions provided by the MSHA inspector as follows:

Equipment capable of traveling at least 10 miles per hour shall be tested with a typical load for that particular piece of equipment. The approach shall be sufficient length to allow the operator to reach and maintain a constant speed between 10 and 20 miles per hour prior to entering the 100-foot measured area. The constant speed shall be maintained up to the point when the operator receives the signal to apply the brakes. The roadway shall be wide enough to accommodate the size of the equipment being tested. The ground shall be generally level, packed, and dry in the braking portion of the test course. Ground moisture may be present to the extent that it does not adversely affect the braking surface. Braking is to be performed using only those braking systems, including auxiliary retarders, which are designed to bring the equipment to a stop under normal operating conditions. Parking or emergency brakes are not to be actuated during the test.

The tests shall be conducted with the transmission in the gear appropriate for the speed the equipment is traveling except for equipment, which is designed for the power train to be disengaged during braking. Testing speeds shall be measured from the point at which the operator receives the signal to apply the service brakes to the final stopped position.

H. FLUID SYSTEMS

Occasionally, hydraulic, fuel, and other fluids hoses/lines will break or fail due to various reasons even under normal, safe operating conditions. In the event of such failure, equipment should be halted and shut down immediately to avoid accidents. Environmental damage should be avoided or minimized by shutting off equipment and closing/not using any systems with a broken hydraulic line. Operator will make every effort to avoid/reduce the introduction of hydraulic fluids, oils, or any other fluids into the environment. If materials are introduced, spill containment and clean-up will be performed.

I. PERSONNEL SAFETY

Personnel working around motor vehicles or mechanized equipment should be aware and alert of operations around them. Maintain appropriate safe distances from equipment when in operation. All personnel must remain aware of operations around them to maintain safe conditions for themselves and others.

J. WORK/REST GUIDELINES

Work/rest guidelines differ for in-woods operations and transportation operations. Transportation operations (truck drivers) are dictated by Arizona law. Drivers are allowed 11 hours of driving per day. Those 11 hours must occur during the first 14 hours of coming on-duty for each day. Once their 11 hours have been reached, they must take 10 hours of break, either in their sleeper berth or out of the truck. This cycle can continue until the driver has a combined total of 70 hours of driving and other on-duty time. Then, they must take a 34-hour break off-duty. Once this cycle of work/rest is complete, drivers are able to initiate another cycle with the same guidelines.

For in-woods operations, work/rest guidelines will be limited to a maximum of 14 hours/day with no more than 70 hours per week. Exceptions to these guidelines can be allowed for emergencies or by written approval for cause from Pioneer's Director of Forest Operations. These guidelines will improve safety for all operations in completion of this contract.

COMPRESSED AIR AND GAS CYLINDERS

A. PROTECTION

Whenever gas cylinders are transported, moved or stored, valve protection caps will be in place. Cylinders will be secured in an upright position unless being hoisted or carried. Cylinder valves will be protected from potential breakage or damage.

HARVESTING & THINNING OPERATIONS

A. PRELIMINARY INSPECTION

Prior to any thinning, the site shall be thoroughly inspected to determine conditions requiring special safety measures.

B. THINNING OF BRUSH AND TREES

Prior to thinning, trees and boulders and other surface encumbrances presenting a special safety hazard (such as hazard trees) to employees will be recognized and evaluated to safely be addressed.

C. PROTECTION

Prior to beginning any thinning, the location of buried utilities shall be identified and precautions taken accordingly.

TRAFFIC SAFETY

A. TRAFFIC CONTROL

To provide for the safe movement of self-propelled mobile equipment, rules governing speed, right of way, direction of movement, and the use of headlights to assure appropriate visibility, shall be established and followed at each location. Signs or signals that warn of hazardous conditions shall be placed at appropriate locations at each job site.

B. OPERATING SPEEDS AND CONTROL OF EQUIPMENT

Operators of self-propelled mobile equipment shall maintain control of the equipment while it is in motion. Operating speed shall be consistent with conditions of roadways, tracks, grades, clearance, visibility, and traffic, and the type of equipment used.

C. WARNING DEVICES

Visible warning devices shall be used when parked mobile equipment creates a hazard to persons in other mobile equipment. Mobile equipment other than forklifts, carrying loads that project beyond the sides or more than four feet beyond the rear of the equipment shall have a warning flag at the end of the projection. Under conditions of limited visibility these loads shall have a warning flag at the end of the projection. Such flags or lights shall be attached to the end of the projection or be carried by persons walking beside or behind the projection.

D. TOWING SAFETY PROCEDURES

A properly sized tow bar or other effective means of control shall be used to tow mobile equipment. Unless steering and braking are under control of the equipment operator on the towed equipment, a safety chain or wire rope capable of withstanding the loads to which it could be subjected shall be used in conjunction with any primary rigging.

E. TRUCK SPOTTERS

If truck spotters are used, they shall be in the clear while trucks are backing into position. Spotters shall use signal lights to direct trucks where visibility is limited. When a truck operator cannot clearly recognize the spotter's signals, the truck shall be stopped.

F. ROADWAY MAINTENANCE

Water, debris, or spilled material on roadways that creates hazards to the operation of mobile equipment shall be moved.

G. NOTIFYING THE EQUIPMENT OPERATOR

When an operator of self-propelled mobile equipment is present, persons shall notify the equipment operator before getting on or off that equipment.

H. GETTING ON OR OFF MOVING EQUIPMENT

Persons shall not get on or off moving mobile equipment.

PHYSICAL QUALIFICATIONS OF EMPLOYEES

A. REQUIREMENT

Persons employed throughout the course of the work shall be physically qualified to perform their assigned duties in a safe manner. Employees will not knowingly be permitted or required to work while their ability or alertness is impaired because of drugs, fatigue, illness, intoxication or other condition that may expose either themselves or others to injury.

B. MINORS

There will not be minors employed on the construction site by either the contractor or subcontractor. Minors are prohibited from the construction site in any capacity.

Form A-1

EMPLOYER: Pioneer Forest Products Corporation

EMPLOYEES' NAME: _____

PLEASE PRINT FIRST - MIDDLE - LAST

SOCIAL SECURITY NUMBER: _____

By Employee's signature below, he/she:

- 1) Acknowledges receipt of a copy of "Pioneer Safety Program".
- 2) Went through a Safety/Security Orientation, conducted by Pioneer Safety Instructor.
- 3) Agrees to abide by all safety and security regulations set forth in items 1, 2, and 3.

EMPLOYEES' SIGNATURE: _____

DATE: _____