

# INVITATION FOR QUOTES FOR A SMALL PROCUREMENT (CONSTRUCTION RELATED)

[per AS 36.30.320(a)]

Project Name & No.: <u>Jonesville Fires</u> , <u>Phase III Drilling</u>	Procurement Agency and Address: Alaska State Parks
Project, 50047-1	Design & Construction Section
Location: near Sutton, Alaska	550 W. 7 <sup>th</sup> Ave., Suite 290A
Location. <u>Incar Sution, Alaska</u>	Anchorage, AK 99501-3565
	Ph.: (907) 269-8731 Fax: (907) 269-8907
Procurement Officer: Rys Miranda, P.E.	Date of Issuance: November 17, 2017
DESCRIPTION OF WORK, REQUIRED COMPLETION DATE, LISTING OF AT Furnish all materials, equipment, and labor necessary to drill and log measure water levels in boreholes, to explore for combustion and mon the Jonesville Mine. Possible additional drilling may be requested as both Attachments: Instructions, Quote Submittal, Notice of Award, General Proprietations of Proprieta	g temperature and Carbon Monoxide (CO) content, and itor groundwater flow in coal-bearing overburden piles at orehole data is analyzed.  1 Conditions, Insurance
Requirements, Technical Specifications, Minimum Rates of Pay, Attach	
The Project cost estimate is: Qunder \$2,000 \Quad \\$2,000 - \\$25,000 \Quad \\$2 \text{ Quotes in excess of \$100,000 will be deemed non-responsive.}	
Davis-Bacon Wages (Title 36.05): are ☐ are not ☒ require	ed on this project.
The following insurance coverages are required: Workers Comp	p X General Liability X Automobile
The following bonding are required:  Bid Bond	X Payment Bond X Performance Bond
Quotes for furnishing all labor, equipment and materials and performing all wor Consideration, quotes must be received before 2:00 P.M. local time on the accepted. Disadvantaged Business Enterprises (DBE's) may submit quotes and varional origin or sex in consideration for an Award which results from this invisolicitation procedures or Project requirements, requests for additional document must be made to:  Title: Jacob Gondek, Project Manager , at:	day of November, 2017. Late quotes cannot be will not be discriminated against on the grounds of race, color, station. Any errors, omissions, or questions pertaining to its, or inquiries pertaining to site conditions or scheduled visits.  Alaska State Parks. Design & Construction Section.
550 W. 7th Ave., Suite 290A, Anch. AK 99501-3565, Telep Applicable provisions of AS 36.30 and 2 AAC 12 govern this solicitatio	hone: (907) 269-8756 : Fax:(907) 269-8907
<b>SUBMITTAL OF QUOTES:</b> Quotes for this Project must be submitte themselves with the <i>Instructions to Offerors</i> , page 2 of this form, prior to submit	d in the manner noted below. All Offerors must familiarize tting their quote.
- VERBAL QUOTES SHALL BE GIVEN TO AT THE ABOVE NOTED TELEPHONE NUMBER, PRIOR TO THE	STATED DEADLINE?
•	5.1.1.2.2.2.1.2.1.2.1.2.1.2.1.2.1.2.1.2.
- WRITTEN QUOTES, INCLUDING AMENDMENTS OR TO THE ABOVE NOTED DEADLINE. QUOTES MUST BE SU ATTACHED.	WITHDRAWALS, MUST BE RECEIVED PRIOR JBMITTED ON FORM DNR 1002, QUOTE SUBMITTAL,
Written quotes may be submitted by Fax, hand delivered, or mailed in a seale Mailed quotes must allow time for delivery and the envelope must be marked as	ed envelope. Confidentiality is only assured for sealed quotes. follows:
Quote for Project:	Procurement Agency Address:
Name: Jonesville Fires, Phase III Drilling Project  Number: 50047-1  Attn: Jacob Gondek <jacob.gondek@alaska.gov></jacob.gondek@alaska.gov>	Alaska State Parks, Design & Construction Section 550 W. 7th Ave., Suite 290A Anchorage, AK 99501-3565
Quote amendments or withdrawals must be made in writing to the individual or received prior to the time for quote submittal.	of the Procurement Agency receiving the quotes, and must be



### INVITATION FOR QUOTES FOR A SMALL PROCUREMENT (CONSTRUCTION RELATED)

INSTRUCTIONS TO OFFICERORS

The State of Alaska desires that all contractors submitting quotes on construction contracts are given a fair and equal opportunity to compete. Contractors are required to follow these instructions:

REVIEW THE PROJECT DOCUMENTS: Most construction projects in excess of \$1,000 will have some type of written documentation prepared expressly for the work. If you are asked to submit a quote and no written information has been provided, you should ask the procurement agency for written documentation. If the scope of services has been described to you verbally, and you are selected for contract award, you must ensure that the information of the services to be performed (scope of work) is put in writing prior to accepting the contract. When providing a quote, carefully review and consider all materials related to the solicitation and work of the contract. By submitting a quote, the contractor warrants that they are familiar with the project requirements, have visited or otherwise examined the site, and are aware of the conditions to be encountered. Contractors can verify the contents and completeness of their documents by contacting the procurement agency individual named on the front of this form.

SUBMITTING THE QUOTE: The quote must be submitted in one of the following formats as called for in the invitation:

- 1. VERBAL in addition to the quote, the contractor must provide the following information: (1) their valid Alaska Business License number, (2) if applicable, proof that they are an Alaskan Veteran Bidder, (3) if applicable, valid Contractor's Registration number, (4) their intended use of Alaskan products, (5) the carrier's name and policy number for their Workers' Comp Insurance (or a statement of sole proprietorship, if applicable), (6) mailing address, and (7) the Employer (Tax) Identification Number or Social Security Number. The Procurement Agency will enter this information on the quote schedule.
- 2. WRITTEN if a written quote is solicited, the contractor must complete, in ink or typewritten, the Small Procurement Quote Submittal Form SPC-002. Failure to acknowledge receipt of addenda or to execute the form correctly and completely may disqualify the quote.

**NOTE**: The Department of Labor requires a contractor to be licensed and registered for the required type of work prior to submitting a quote. If the procurement agency determines that the contractor is improperly registered or licensed, their quote may be deemed nonresponsive.

<u>SUBCONTRACTOR LISTING:</u> Subcontractors intended to be utilized on this contract must be listed in the response to the solicitation. Work shall not be awarded to any subcontractor without prior approval from the procurement agency. Subcontractors may be added or removed only as approved by the procurement agency.

DETERMINATION OF THE LOWEST RESPONSIBLE QUOTE AND CONTRACT AWARD: Following receipt and determination of all responsive oral, written or sealed quotes, the procurement agency will compare the quotes and determine the lowest quote. If the procurement agency discovers a discrepancy between the unit price and the extended amount; the unit price will prevail. Conditioned quotes, unless expressly requested, will not be considered. When the quote schedule is composed of a basic amount with alternates, the procurement agency will base its determination of the low quote and the amount of the contract award solely upon those quotes, basic and alternates that are priced within the extent of available construction funds. Alternates will be considered for award in the order listed, except that if the order of award is not affected, the award may include any combination of funded alternates, or none, as may be in the best interest of the procurement agency.

When determining the lowest quote, the procurement agency will also give a 5% Alaska Bidder, 5% Alaska Veteran preference, and an appropriate Alaska Products preference to quotes designating the applicability of any of these preferences. To qualify for the Alaska Bidder preference (per AS 36.30.170) the person must (1) hold a current Alaska business license, (2) submit the quote for goods or services under the name appearing on the business license, (3) has maintained a place of business within the state staffed by the bidder, or an employee of the bidder, for a period of six months immediately preceding the date of the quote; (4) is incorporated or qualified to do business under the laws of the state, is a sole proprietorship and the proprietor is a resident of the state, is a limited liability company organized under AS 10.50 and all members are residents of the state, or is a partnership under AS 32.05 or AS 32.11 and all partners are residents of the state; and, (5) if a joint venture, is composed entirely of venturers that qualify under (1) - (4) of this subsection. AS 36.30.170(b). If a bidder qualifies for the Alaska Bidder preference, under AS 36.30.170(b), and is a qualifying entity as defined in AS 36.30.175, they will be awarded an Alaska Veteran preference of five percent (5%). The preference will be given to a (1) sole proprietorship owned by an Alaska Veteran; (2) partnership under AS 32.06 or AS 32.11 if a majority of the partners are Alaska Veterans; or (4) corporation that is wholly owned by individuals and a majority of the individuals are Alaska Veterans.

Upon request, a booklet fully describing the Alaska Products preference program is available from the procurement agency.

The procurement agency will make a determination of **responsibility** as required by 2 AAC 12.500. If the lowest contractor is declared responsible, the procurement agency will execute the *Notice of Award / Notice to Proceed,* Form SPC-003, and send it to the contractor for acknowledgement. If the lowest contractor is found to be non-responsible, this process will be repeated with the second lowest contractor -- and so on until the lowest responsive and responsible contractor is determined.

NOTICE OF AWARD AND PROTEST: A written notice will be provided on all awards exceeding \$25,000 (2 AAC 12.400(h)). All protests must be filed with the Commissioner of the procurement agency (or designee) and copied to the Procurement Officer. Protest procedures are described in AS 36.30.560 and 2 AAC 12.695. The extent of the protest remedy is limited to quote preparation costs (AS 36.30.585).



# SMALL PROCUREMENT QUOTE SUBMITTAL (CONSTRUCTION RELATED)

[per AS 36.30.320(a)]

Project N	ame & No.: <u>Jonesville Fires</u> , P	hase III	Drilling		urement Agency a	and Address:
	Project, 50047-1			Alas	ska State Parks	
					ign & Construct	
Location:	Location: near Sutton, Alaska 550 W. 7 <sup>th</sup> Ave, Suite 290A					
					horage, AK 995	
					ne: (907) 269-87	
D				Fax:	<u>: (907) 269 –890</u>	07
Procurem Officer:	Rys Miranda, P.E. 550 W. 7 <sup>th</sup> Ave., Suite 290	)A			Issuance: Nover Due: <b>November</b> 2	ŕ
	Anchorage, AK 99501					, 2021
	Offerors must read all attachment	s to this so	hedule.			
ITEM	TINEDA A		1	VIT		
NO.	ITEM	UNIT		ICE _	QUANTITY	AMOUNT
1.0	Borehole Drilling	L.F.	\$		2,100	\$
1.1	Mob / Demob Wide Pad Dozer, 185 HP Min.	L.S.	\$		All Required	\$
1.2	wide Pad Dozer, 185 HP Min.	Hours	\$		30	\$ \$ \$
			<b>D</b>	OLC DI	D (DD) TOTAL	\$
			DA	SIC DI	D (BB) TOTAL	3
Contractor	r:			(	Contractor Reg. N	o.:
Authorize	d Signature:			7	Γitle:	
Address:_						
E-mail:						
Business I	icense #: F	EIN or SSN	J;		Phone #:	
Offeror is	Claiming:	Preference	;			
	■ Alaska Veteran's	Preferenc	e			
	_		-			4
	Alaska Products	Pref. (wor	ksheet)			
		• • • • • • •	• • • • • •	• • • • • •	•••••••	•••••
	Procurement Agency Official:					
	Date of Receipt of Bid:					



# NOTICE OF AWARD (NOA) SMALL PROCUREMENT CONTRACT (CONSTRUCTION RELATED)

[per AS 36.30.320]

Project Name & No.: <u>Jonesville Fires, Phase III</u>	Procurement Agency and Address: Alaska State Parks					
Project, 50047-1	Design & Construction Section					
Location: near Sutton, Alaska			ve., Suite 290A			
Location. <u>Incar Sutton, 1 Maska</u>			K 99501-3565			
	!		9-8731 Fax: (907) 26	<u></u>		
		111. (///,	2-0/JI I an. (701) 20	) <del>9-</del> 0701		
Procurement Officer's Signature:		Date of Issuance	e:			
***	****	k	a			
TO:	FOR:		The Contractor Must S	Submit:		
		d to Basic Bid of:	Insurance *	X		
	including th	e basic quote	Bonding *	<u> </u>		
	e pasic quote e quote item(s):	Certified Wages *	X			
			Dept. of Labor (Notice of Work) *	X		
			Subcontractor List *	X		
			* Comments as applica	able:		
Your quote in the amount of \$ submitted on, is accepted for performance of the Work described in the attached Invitation for Quotes (Form DNR 1001), and the quote as submitted on the Small Procurement Quote Submittal (Form DNR 1002), which are a part of this Contract.  The Contractor must sign, date, and return this document to the procurement address shown above. The Procurement Officer will then sign and return a copy to the Contractor, and the Award will be deemed made. The Work of this contract may not commence until the Notice to Proceed (NTP) is issued.  Contractor's Signature of Contract Award Acceptance:						
NOTICE TO UNSELECTED OFFE	RORS C	N PROJEC	TS OVER \$ 25,0	00		
In accordance with the protest rights afforded unde of Award is hereby provided to those individuals a solicitation on which this award is made.	er 2 AAC 1	12.400(d)(2)(B)	) & (3), a copy of this	s Notice		

# NOTICE OF AWARD (NOA) SMALL PROCUREMENT CONTRACT (CONSTRUCTION RELATED)

### GENERAL CONDITIONS [Construction Procurement under AS 36.30.320]

These terms, conditions and requirements apply to the Contract Documents describing the Work for the Project. If any provision of these Contract Documents is declared by a court to be illegal or in conflict with any law, the validity of the remaining provisions and the ensuing rights and obligations of the Parties to the contract shall not be affected.

Whenever used in these Contract Documents, the following terms shall have the indicated meaning. Any term not so defined shall have its ordinary meaning.

- · Approved or Approval means written approval by the Procurement Officer or authorized representative.
- Award means the written acceptance of the lowest responsive and responsible quote by the Procurement Agency.
- Contract Documents includes the Invitation for Quotes for a Small Procurement, Form SPC-001 (with Instructions if issued), the Notice of Award / Notice to Proceed, Form SPC-003, any addenda, written changes, or attachments as noted in the description of the Work.
- · Procurement Officer the person authorized to enter into and administer the contract on behalf of the Procurement Agency.
- Parties to the Contract includes the Procurement Agency, the owner Agency representing the State of Alaska, and the Contractor, being the entity
  contracting with the owner Agency for performance of the Work.
- Project the total construction, of which the Work performed under the Contract is the whole or part.
- · Project Manager the Procurement Officer's authorized representative, responsible for Contract administration.
- Work is the act of, and the result from, performing services, furnishing labor, furnishing and incorporating materials and equipment into the Project and performing other duties and obligations, all as required by the Contract Documents.
- 1. The Procurement Officer (or authorized representative) has the authority to make findings, determinations and decisions with respect to the contract; to Approve materials, Work and payment therefore; and to modify or terminate the contract on behalf of the Procurement Agency.
- 2. The Contractor shall have sole responsibility for the means, methods, sequences, or procedures of construction and safety precautions related to the Project. The Contractor shall conduct all Work in such a manner that protects the public and State resources.
- 3. The Contractor must comply with all applicable laws, regulations, codes, ordinances and written directives issued by the Procurement Officer. In addition, the Contractor must obtain applicable licenses and permits; provide supervision, labor, tools, and new materials (except as may otherwise be provided by the Procurement Agency); and utilize Alaska Products and Wood Products when applicable (see AS 36.05.010 & AS 36.30.322).
- 4. The Contractor shall not award Work to any subcontractor without prior Approval from the Procurement Officer.
- The Procurement Agency reserves the right to make written changes to the Contract Documents for modifications within the general scope of the Work.
- 6. Any act or occurrence, be it a result of an emergency, differing site condition or change order, which may form the basis of a claim for a price or time adjustment must be reported immediately to the Procurement Officer.
- 7. The Department of Labor and Workforce Development, Wage and Hour Administration, must be notified in accordance with AS 36.05.010 and AS 36.05.030 if the resulting contract for repairs or construction exceeds \$2,000. The Contractor must comply with the requirements noted within the Department of Labor packet entitled, "Laborers' & Mechanics' Minimum Rates of Pay." To obtain a copy of the referenced packet, contact the Procurement Agency or the Department of Labor.
- 8. The primary contractor working on public construction projects with an amount of \$25,000 or more must file a Notice of Work and pay a one percent fee based on the estimated value of work performed by the prime contractor and one percent of the value of each subcontractor's price, to the Department of Labor and Workforce Development, Wage and Hour Administration (DOLWD) The maximum fee is \$5,000.00. The notice and fees must be filed with the DOLWD before work commences on the project.
  - Upon completing the construction project, the primary contractor must file a Notice of Completion (NOC) and make payment of any additional fees due to increases in the contract amounts due the primary contractor. The Notice of Work and Notice of Completion forms are available at:

    http://www.labor.state.ak.us/lss/lssforms.htm
- 9. The Contractor shall indemnify, save harmless, and defend the Procurement Agency, its agents and its employees in accordance with Appendix B1. Furthermore, the Contractor shall, prior to the Award of the contract, provide proof of Workmen's Compensation, General Liability, and Automobile Insurance in amounts as applicable under Appendix B1. These coverages shall remain in force for the duration of the Contract.
- 10. The Contractor shall remedy all defects in materials or workmanship that develop within a period of one year from the date of final payment,
- 11. The Procurement Agency will make final payment to the Contractor following approval of completion of all Work and the Contractor's submittal of all releases, warranties, record documents, permits and invoices. Liens or other claims relating to the Project may be withheld from final payment if written notice is first given to the Contractor. Acceptance of the final payment will constitute the Contractor's waiver to future claims.
- Any dispute arising out of this Contract, which cannot be satisfactorily remedied by the Parties to the Contract, shall be resolved under AS 36.30.620 - 699.

### APPENDIX B<sup>1</sup> INDEMNITY AND INSURANCE

#### **Article 1. Indemnification**

The Contractor shall indemnify, hold harmless, and defend the contracting agency from and against any claim of, or liability for error, omission or negligent act of the Contractor under this agreement. The Contractor shall not be required to indemnify the contracting agency for a claim of, or liability for, the independent negligence of the contracting agency. If there is a claim of, or liability for, the joint negligent error or omission of the Contractor and the independent negligence of the Contracting agency, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "Contractor" and "Contracting agency", as used within this and the following article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "independent negligence" is negligence other than in the Contracting agency's selection, administration, monitoring, or controlling of the Contractor and in approving or accepting the Contractor's work.

#### Article 2. Insurance

Without limiting Contractor's indemnification, it is agreed that Contractor shall purchase at its own expense and maintain in force at all times during the performance of services under this agreement the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the Contractor's policy contains higher limits, the state shall be entitled to coverage to the extent of such higher limits. Certificates of Insurance must be furnished to the Contracting Officer prior to beginning work and must provide for a 30-day prior notice of cancellation, nonrenewal or material change of conditions. Failure to furnish satisfactory evidence of insurance or lapse of the policy is a material breach of this contract and shall be grounds for termination of the Contractor's services. All insurance policies shall comply with, and be issued by insurers licensed to transact the business of insurance under AS 21.

- **2.1 Workers' Compensation Insurance:** The Contractor shall provide and maintain, for all employees engaged in work under this contract, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal U.S.L. & H. and Jones Act requirements. The policy must waive subrogation against the State.
- **2.2 Commercial General Liability Insurance:** covering all business premises and operations used by the Contractor in the performance of services under this agreement with minimum coverage limits of \$300,000, combined single limit per occurrence.
- **2.3 Commercial Automobile Liability Insurance:** covering all vehicles used by the Contractor in the performance of services under this agreement with minimum coverage limits of \$300,000, combined single limit per occurrence.



# PAYMENT BOND SMALL PROCUREMENT CONTRACT (CONSTRUCTION RELATED)

#### KNOW ALL MEN BY THESE PRESENTS:

That			_ of	, as			
firmly bound and	l held unto the	State of Alaska in	of the penal sum of	, as Surety,			
for the payment w	Dollar whereof, well an	rs (\$ nd truly to be paid	), good and lawfi to the State of Alask	ful money of the United States of America ka, we bind ourselves, our heirs, ally, firmly by these presents.			
WHEREAS, the sa	aid Principal ha	as entered into a w	vritten contract with	said State of Alaska, on the of			
said work to be do	one according t	to the terms of said	d contract.				
all requirements of supplies furnished materials and sup authorized modific in full force and ef	Now, THEREFORE, the conditions of the foregoing obligation is such that if the said Principal shall comply with all requirements of law and pay, as they become due, all just claims for labor performed and materials and supplies furnished upon or for the work under said contract, whether said labor be performed and said materials and supplies be furnished under the original contract, any subcontract, or any and all duly authorized modifications thereto, then these presents shall become null and void; otherwise they shall remain in full force and effect.  IN WITNESS WHEREOF, we have hereunto set our hands and seals at						
,	this	day of		_ A.D., 20			
Principal:							
Address: _							
			Phone:				
			Contact Name:				
			By:				
			By:				
Surety: _							
Address: _							
			Phone:				
			Contact Name:				
			Ву:				
			Ву:				
The offered bond	has been chec	ked for adequacy	under the applicable	e statutes and regulations:			
Procuremen	t Agency Author	orized Representati	dive	Date			

#### INSTRUCTIONS

- 1. This form, for the protection of persons supplying labor and material, shall be used whenever a payment bond is required. There shall be no deviation from this form without approval from the Department of Transportation & Public Facilities (DOT&PF) Chief Contracts Officer.
- 2. The full legal name, business address, phone number, and point of contact of the Principal and Surety shall be inserted on the face of the form. Where more than a single surety is involved, a separate form shall be executed for each surety.
- 3. The penal amount of the bond, or in the case of more than one surety, the amount of the obligation shall be entered in words and in figures.
- 4. Where individual sureties are involved, a completed Affidavit of Individual Surety shall accompany the bond. Such forms are available upon request from the procurement Agency Representative.
- 5. The bond shall be signed by authorized persons. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of authority must be furnished.



#### PERFORMANCE BOND SMALL PROCUREMENT CONTRACT (CONSTRUCTION RELATED)

#### KNOW ALL MEN BY THESE PRESENTS:

That and firmly bound and held unto the State of Ala Dollars (\$ payment whereof, well and truly to be paid administrators, and assigns, jointly and set WHEREAS, the said Principal has entered in A.D., 20, for the construction of	or  liska in the penal sum of  liska in the pena	as S ney of the United States of Ar arselves, our heirs, successor state of Alaska, on the ording to the terms of said co	nerica for the rs, executors,  of ontract.
Now, THEREFORE, the conditions of the for perform and complete all obligations and we the Department of Transportation and Publibe due upon completion of the project, then full force and effect.	ork under said contract and if the ic Facilities any sums paid him was these presents shall become nul	e Principal shall reimburse u hich exceed the final paymet I and void; otherwise they sh	pon demand of nt determined t all remain in
IN WITNESS WHEREOF, we have hereunto this day	of A.D	., 20	, ,
Principal: Address:	Phone: Contact Nan By:		
Surety:			
Address:			
	Phone:		<del></del>
	Contact Nam	e:	<del></del>
	By:		
	Ву:		
The offered bond has been checked for adec	quacy under the applicable statu	tes and regulations:	
Procurement Agency Authorized Repr	resentative	Date	

#### **INSTRUCTIONS**

- 1. This form shall be used whenever a performance bond is required. There shall be no deviation from this form without approval from the Department of Transportation & Public Facilities (DOT&PF) Chief Contracts Officer.
- 2. The full legal name, business address, phone number, and point of contact of the Principal and Surety shall be inserted on the face of the form. Where more than a single surety is involved, a separate form shall be executed for each surety.
- 3. The penal amount of the bond, or in the case of more than one surety the amount of obligation, shall be entered in words and in figures.
- 4. Where individual sureties are involved, a completed Affidavit of Individual Surety shall accompany the bond. Such forms are available upon request from the procurement Agency Representative.
- 5. The bond shall be signed by authorized persons. Where such person is signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of authority must be furnished.

#### **ATTACHMENTS**

- A. Technical Specifications
- B. Location Map
- C. Drilling Site Map
- D. Borehole Location Coordinates
- E. Borehole Logging format example
- F. State and Federal Wage Rates URL References

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#### TECHNICAL SPECIFICATIONS

These technical specifications are an addendum to the Alaska Department of Transportation and Public Facilities Standard Specifications for Highway Construction Manual 2017 edition. Subsections referenced below can be found in their entirety there.

#### **BACKGROUND**

Wash plant spoils from past mining operations at the Jonesville Mine contain remnant coal which is contributing to underground combustion. The Abandoned Mine Lands section has a mandate to extinguish burning refuse piles, as part of its mission to reclaim mined lands to mitigate hazards, restore wildlife habitat, and restore public lands to conditions safe for recreation and general public use and enjoyment. The extent of underground combustion must be assessed and defined before devising an extinguishment plan. Copies of location maps and the proposed drilling area are available at the DNR Division of Mining, Land, and Water office in Anchorage. Contact Roger Allely, AML Section, at (907) 269-8644 for information.

The AML section shall secure right of entry permits from the State for the work. As mandated by the Office of Surface Mines, all appropriate agency clearances have been obtained:

- the Attorney General's Determination of Eligibility approval
- USF&W for Threatened and Endangered species, and
- State Historical Preservation Officer (SHPO)

All work performed under this contract is to be adequate to achieving the goals of the endeavor.

#### 1.0 SCOPE

To establish a contract to drill boreholes, measure and log temperature and CO content of boreholes and cuttings, to explore for combustion, and determine the bottom limits of coal-bearing spoil piles at the 2017 Jonesville Fires, Phase III Drilling Project, near Sutton, Alaska. Contract work will also log any water-bearing strata, measure any resulting static water levels, and install small-diameter PVC piezometers to monitor any groundwater flow system encountered.

#### 2.0 DESCRIPTION OF WORK

- 2.1 The contractor shall provide all equipment, labor and materials necessary to complete boring of holes for acquisition of combustion data. The work shall consist of the following:
  - a. CLEARING, ROAD AND PAD BUILDING: Approximately 20 borehole sites are located on tree-covered, sloped ground. Slope angles generally vary from 20%-35%. Vegetation shall be cleared, access roads pioneered, and drill site pads embanked as needed to facilitate completion of the work. Vegetation shall be disturbed only as necessary, and preserved wherever possible.

Jonesville Fires Phase III Drilling Project Number: 50047-1

- b. DRILLING: Auger drill boreholes to native ground, bedrock, or to depths no more than **150** feet in coal mining spoil piles. Rig shall be capable of drilling finished boreholes at angles of up to 15° from vertical. To perform this contract, auger drilling will be used to pull cuttings out of the hole for examination and measurements. Borehole locations in Alaska State Plane 4, US Survey Feet are provided in Attachment E.
- c. MEASUREMENTS: Measure temperatures of drill cuttings and carbon monoxide (CO) gas content in cuttings or emanating from the borehole. Log soil and rock types encountered and at what depth. Measurements will be taken at the surface and at 5 foot intervals during drilling. Log any water-bearing strata encountered and at what depth, and measure water levels in boreholes after allowing time for level to stabilize. Lithology, temperatures, gas level, and water level data will be logged in a format and field notebook provided by the project engineer.
- d. Log depths and take and record all measurements described above at each change in soil or rock type encountered during drilling, when it occurs outside the 5 ft interval. Test again for temperature and CO, and record results.
- e. Install small-diameter piezometers to monitor groundwater levels in any holes encountering significant water flow. Construct and place screens at the level of water-bearing formations. Log depths of piezometer installation and screen placement. Total piezometer footage is not anticipated to exceed 900 feet.
- f. Complete backfilling of auger holes after drilling and measuring. Backfilling shall be performed immediately upon completion of logging and measuring. Auger cuttings and surrounding surface soils shall be used for backfill materials. Surface soils may have to be transported from warm (unfrozen) or other suitable borrow areas onsite. Backfill shall be compacted by tamping materials in the top five feet of the hole and mounding fill material over the borehole, to mitigate open-hole safety hazards, and seal against air moving into or through the hole.
- g. Contractor shall provide snow removal if needed on access routes or around the work site to accomplish the required work.
- h. An EPA NPDES Permit is not required for this project. Though a SWPPP is not needed, the contractor will exercise due diligence not to discharge sediment or contaminants into waters of the U.S. During times of heavy rains, this may require the Contractor to surround their drilling operation with Best Management Practice (BMP) measures to contain sediment from flowing offsite.
- 2.2 Additional drilling work and borehole locations may be added based on findings. The total drilling footage for this contract is not anticipated to exceed 2,100 feet.
- 2.3 Work is scheduled for January 2018 through February 28, 2017.

Jonesville Fires Phase III Drilling Project Number: 50047-1

#### 3.0 EQUIPMENT

- 3.1 All equipment must meet pertinent Federal and State safety standards.
- 3.2 All workers must perform work in compliance with pertinent Federal and State safety regulations.
- 3.3 <u>Measuring Instruments.</u> The Contractor will be required to provide temperature, CO, and water-level measuring instruments. Measuring equipment must meet or exceed the following standards:

#### <u>Temperature</u> (contacting or non-contacting)

Measurement Range

-30°C to 500°C (-20°F to 932°F)

Accuracy

± 1 °C (2°F) from 10°C to 30°C (50°F to 86°F)

Outside 10°C to 30°C (50°F to 86°F): ± 1.5°C (3°F) or ± 1.5 % of reading.

whichever is greater

Repeatability Calibration ±0.5 % or ≤ ±1°C (±2°F), whichever is greater Current certified factory or vendor calibration

#### Carbon Monoxide (CO)

Measurement Range

0 to 500 ppm

Measurement Resolution

1 ppm

Accuracy

±5% or ± 3 ppm, whichever is greater

Calibration

Current certified factory- or vendor calibrated, with sensor

zeroing and self-test on startup.

#### **General Operating Conditions**

Operating Temperature

-20°C to 50°C

**Ambient Humidity** 

0% to 90% (non-condensing)

Temperature and CO measuring instruments must be calibrated, and certified to remain within calibration tolerances for the period of the work.

#### Water Level

Measurement Range

0-200 Feet (0-60.9 Meters)

Accuracy

± 0.1 Foot (0.03 Meters)

#### 3.4 <u>Materials</u>

Monitoring Piezometers

PVC Pipe -- Schedule 40, 3/4" I.D.

Jonesville Fires Phase III Drilling

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#### Screen Construction

Construct infiltration slots with hacksaw, not exceeding onehalf pipe diameter. Alternate slots around pipe circumference and along its length so as not to compromise pipe strength. Fabricate screen length equal to water-bearing strata thickness. Install at same level as water bearing strata.

#### 4.0 METHOD OF MEASUREMENT

4.1 Measurement for payment will be based on the total linear footage of completed holes drilled, and only after the State receives documentation with logged lithologies and combustion measurement data.

#### 5.0 BASIS OF PAYMENT

- 5.1 Payment shall be made at the unit price per foot of borehole completed to native ground or bedrock, with logged lithologies, temperature, CO, and water-level measurements documented and submitted to the State.
- 5.2 Mobilization and Demobilization. Payment will be made at the lump sum unit of measure
- 5.3 Wide Pad Dozer, 185 HP Min. Payment will be made at the hourly rate of equipment used, as directed by the project engineer.

#### **PAYMENT WILL BE MADE UNDER**

<u>Item</u>	Pay Item	Pay Unit
1.0	Completed footage of holes drilled and measured for combustion, with data logged and transmitted to the State. Construction and emplacement of water monitoring piezometers is subsidiary.	Linear Foot
1.1	Mobilization/Demobilization.	Lump Sum
1.2	Wide Pad Dozer, 185 HP Minimum	Hours

#### General Information and Security.

#### A. Contractor Responsibilities include

- 1. The Contractor will be responsible for coordinating all work on this project with the Project Manager or the designated Project Engineer.
- 2. The Contractor is responsible for materials, tools and equipment storage security. Any event of theft, vandalism, or wildlife damage is the responsibility of the Contractor. Lost or unusable materials, tools, or equipment will be replaced by the Contractor at his own cost.

Jonesville Fires Phase III Drilling Project Number: 50047-1

Attachment A

3. Removal and proper disposal of all debris associated with this project. This includes but is not limited to periodic disposal of accumulated waste materials and rubbish, and cleanup of the worksite prior to substantial completion.

#### B. Project Schedule.

- 1. The Department of Natural Resources will distribute the Notice of Award on or about November 28th, 2018. The contract period will extend from that date through February 15th, 2018.
- 2. The contractor must notify the Project Manager, Jacob Gondek, 269-8756, five (5) days prior to starting work on the project, with a project start date and project schedule. \

#### C. Payment of Work.

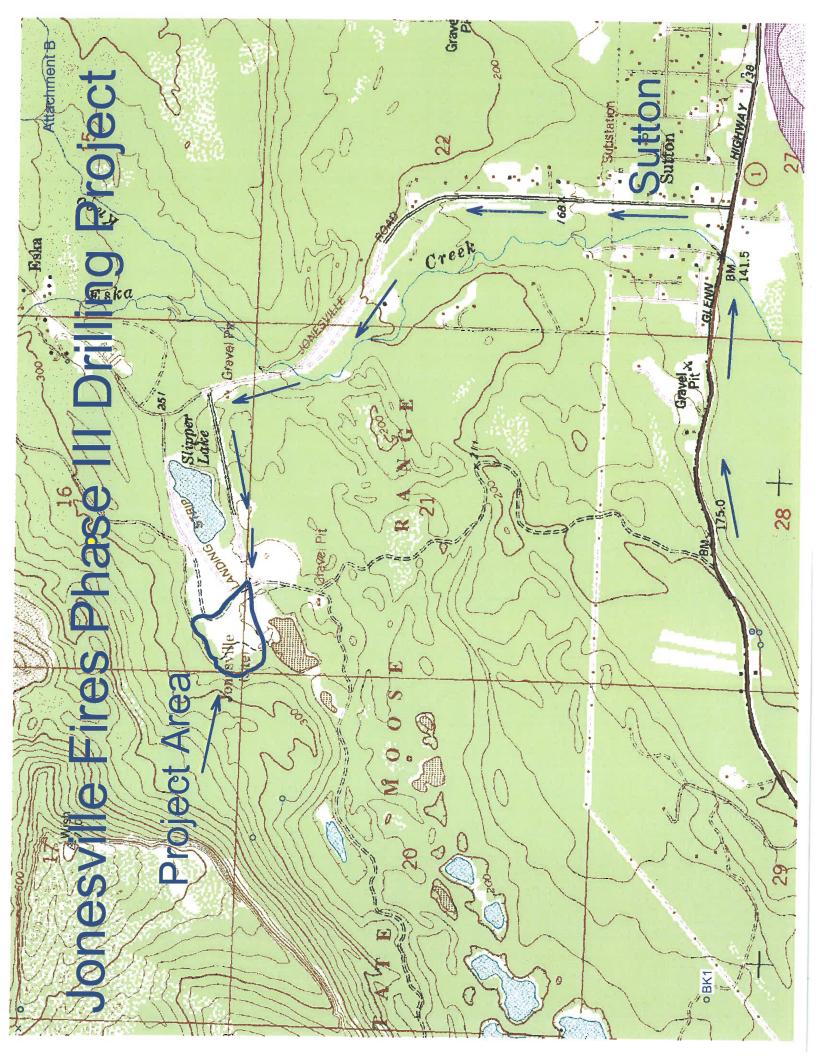
- 1. Final payment will be made upon completion of the project to the satisfaction of the Project Manager, upon receipt of the Notice of Completion of Public Works approved by the Alaska Department of Labor and Workforce Development (DOL), and upon receipt of the contractor's final invoice.
- 2. A partial payment of up to 85% of the total project cost can be made upon completion of job and receipt of materials specified in pay item, however, full payment cannot be made without the Notice of Completion of Public Works form signed by DOL. It is the Contractor's responsibility to provide the DOL signed Notice of Completion of Public Works form with their final invoice for payment.
- Submit invoice and copies of the approved Notice of Completion signed by DOL to: Department of Natural Resources Division of Parks, Design & Construction Section 550 W. 7<sup>th</sup> Avenue, Suite 290A Anchorage, Alaska 99501-3565

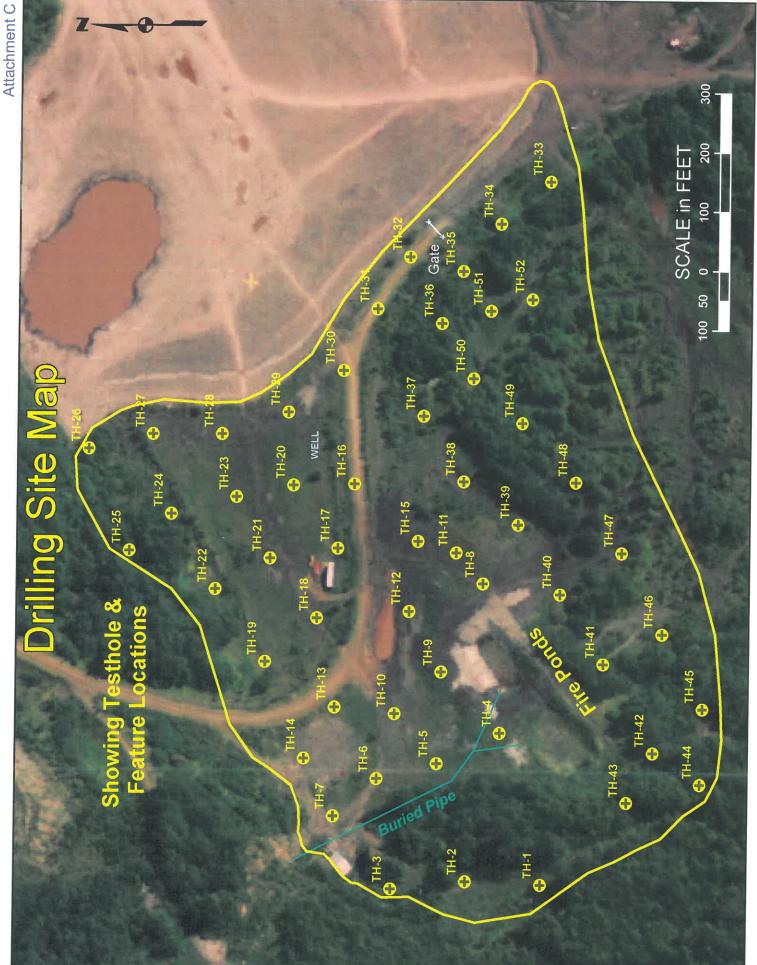
#### D. Mobilization and Demobilization.

Mobilization and demobilization costs will be paid once for the contract.

**END OF SECTION** 

Jonesville Fires Phase III Drilling Project Number: 50047-1





#### Borehole Location Coordinates Alaska State Plane Zone 4, US Survey Feet

1       1,824,750.72       2,825,600.21         2       1,824,755.67       2,825,728.01         3       1,824,742.42       2,825,853.73         4       1,825,006.59       2,825,672.15         5       1,824,954.36       2,825,778.07         6       1,824,928.39       2,825,879.24         7       1,824,865.03       2,825,952.07         8       1,825,258.25       2,825,702.51         9       1,825,109.09       2,825,772.22         10       1,825,310.50       2,825,748.18         12       1,825,210.79       2,825,826.66         13       1,825,048.70       2,825,951.19         14       1,824,961.98       2,826,002.65         15       1,825,329.33       2,825,921.02         17       1,825,316.56       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,299.41       2,826,155.78         23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17 <th>Point Number</th> <th>Easting</th> <th>Norhing</th>	Point Number	Easting	Norhing
2 1,824,755.67 2,825,728.01 3 1,824,742.42 2,825,853.73 4 1,825,006.59 2,825,672.15 5 1,824,954.36 2,825,778.07 6 1,824,928.39 2,825,879.24 7 1,824,865.03 2,825,952.07 8 1,825,109.09 2,825,772.22 10 1,825,310.50 2,825,748.18 12 1,825,210.79 2,825,849.84 11 1,825,310.50 2,825,748.18 12 1,825,210.79 2,825,826.66 13 1,825,240.79 2,825,826.66 13 1,825,329.33 2,825,951.19 14 1,824,961.98 2,826,002.65 15 1,825,329.33 2,825,910.02 17 1,825,316.56 2,825,947.76 18 1,825,425.16 2,825,921.02 17 1,825,316.56 2,825,947.76 18 1,825,425.16 2,825,921.02 17 1,825,316.56 2,825,947.76 18 1,825,422.72 2,826,070.64 20 1,825,422.72 2,826,070.64 20 1,825,422.72 2,826,070.64 20 1,825,422.72 2,826,024.33 21 1,825,299.41 2,826,063.31 22 1,825,247.06 2,826,155.78 23 1,825,373.70 2,826,230.17 25 1,825,311.35 2,826,301.07 26 1,825,483.09 2,826,371.12 27 1,825,507.95 2,826,262.71	1	1.824.750 72	2 825 600 21
4 1,825,006.59 2,825,672.15 5 1,824,954.36 2,825,778.07 6 1,824,928.39 2,825,879.24 7 1,824,865.03 2,825,952.07 8 1,825,258.25 2,825,702.51 9 1,825,038.21 2,825,849.84 11 1,825,310.50 2,825,748.18 12 1,825,210.79 2,825,826.66 13 1,825,048.70 2,825,951.19 14 1,824,961.98 2,826,002.65 15 1,825,329.33 2,825,812.64 16 1,825,425.16 2,825,921.02 17 1,825,316.56 2,825,921.02 17 1,825,316.56 2,825,947.76 18 1,825,124.69 2,826,070.64 20 1,825,422.72 2,826,070.64 20 1,825,422.72 2,826,024.33 21 1,825,299.41 2,826,063.31 22 1,825,247.06 2,826,155.78 23 1,825,311.35 2,826,301.07 26 1,825,483.09 2,826,371.12 27 1,825,507.95 2,826,262.71			
4       1,825,006.59       2,825,672.15         5       1,824,954.36       2,825,778.07         6       1,824,928.39       2,825,879.24         7       1,824,865.03       2,825,952.07         8       1,825,258.25       2,825,702.51         9       1,825,109.09       2,825,772.22         10       1,825,038.21       2,825,849.84         11       1,825,310.50       2,825,826.66         13       1,825,210.79       2,825,826.66         13       1,825,048.70       2,825,951.19         14       1,824,961.98       2,826,002.65         15       1,825,329.33       2,825,812.64         16       1,825,329.33       2,825,921.02         17       1,825,316.56       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,262.71	3		
5       1,824,954.36       2,825,778.07         6       1,824,928.39       2,825,879.24         7       1,824,865.03       2,825,952.07         8       1,825,258.25       2,825,702.51         9       1,825,109.09       2,825,772.22         10       1,825,038.21       2,825,849.84         11       1,825,310.50       2,825,748.18         12       1,825,210.79       2,825,826.66         13       1,825,048.70       2,825,951.19         14       1,824,961.98       2,826,002.65         15       1,825,329.33       2,825,812.64         16       1,825,329.33       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,199.02       2,825,982.85         19       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,262.71			
6       1,824,928.39       2,825,879.24         7       1,824,865.03       2,825,952.07         8       1,825,258.25       2,825,702.51         9       1,825,109.09       2,825,772.22         10       1,825,038.21       2,825,849.84         11       1,825,310.50       2,825,748.18         12       1,825,210.79       2,825,826.66         13       1,825,048.70       2,825,951.19         14       1,824,961.98       2,826,002.65         15       1,825,329.33       2,825,812.64         16       1,825,425.16       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,063.31         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71	5		
7       1,824,865.03       2,825,952.07         8       1,825,258.25       2,825,702.51         9       1,825,109.09       2,825,772.22         10       1,825,038.21       2,825,849.84         11       1,825,310.50       2,825,748.18         12       1,825,210.79       2,825,826.66         13       1,825,048.70       2,825,951.19         14       1,824,961.98       2,826,002.65         15       1,825,329.33       2,825,812.64         16       1,825,425.16       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,070.64         20       1,825,299.41       2,826,063.31         22       1,825,299.41       2,826,155.78         23       1,825,247.06       2,826,155.78         23       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71	6		
8       1,825,258.25       2,825,702.51         9       1,825,109.09       2,825,772.22         10       1,825,038.21       2,825,849.84         11       1,825,310.50       2,825,748.18         12       1,825,210.79       2,825,826.66         13       1,825,048.70       2,825,951.19         14       1,824,961.98       2,826,002.65         15       1,825,329.33       2,825,812.64         16       1,825,425.16       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,124.69       2,826,070.64         20       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,230.17         25       1,825,373.70       2,826,230.17         25       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71	7	1,824,865.03	
10       1,825,038.21       2,825,849.84         11       1,825,310.50       2,825,748.18         12       1,825,210.79       2,825,826.66         13       1,825,048.70       2,825,951.19         14       1,824,961.98       2,826,002.65         15       1,825,329.33       2,825,812.64         16       1,825,425.16       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,124.69       2,826,070.64         20       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,063.31         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71		1,825,258.25	
11       1,825,310.50       2,825,748.18         12       1,825,210.79       2,825,826.66         13       1,825,048.70       2,825,951.19         14       1,824,961.98       2,826,002.65         15       1,825,329.33       2,825,812.64         16       1,825,425.16       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,199.02       2,825,982.85         19       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,383.09       2,826,371.12         27       1,825,507.95       2,826,262.71		1,825,109.09	2,825,772.22
12       1,825,210.79       2,825,826.66         13       1,825,048.70       2,825,951.19         14       1,824,961.98       2,826,002.65         15       1,825,329.33       2,825,812.64         16       1,825,425.16       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,199.02       2,825,982.85         19       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71			2,825,849.84
13       1,825,048.70       2,825,951.19         14       1,824,961.98       2,826,002.65         15       1,825,329.33       2,825,812.64         16       1,825,425.16       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,199.02       2,825,982.85         19       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71			
14       1,824,961.98       2,826,002.65         15       1,825,329.33       2,825,812.64         16       1,825,425.16       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,199.02       2,825,982.85         19       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71			2,825,826.66
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16       1,825,425.16       2,825,921.02         17       1,825,316.56       2,825,947.76         18       1,825,199.02       2,825,982.85         19       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71			
17       1,825,316.56       2,825,947.76         18       1,825,199.02       2,825,982.85         19       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71			
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19       1,825,124.69       2,826,070.64         20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71			
20       1,825,422.72       2,826,024.33         21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71			
21       1,825,299.41       2,826,063.31         22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71			
22       1,825,247.06       2,826,155.78         23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71			
23       1,825,402.94       2,826,120.59         24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71			
24       1,825,373.70       2,826,230.17         25       1,825,311.35       2,826,301.07         26       1,825,483.09       2,826,371.12         27       1,825,507.95       2,826,262.71			
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29 1,825,545.80 2,826,034.11			
30 1,825,616.70 2,825,941.31	30		
31 1,825,721.28 2,825,884.82			
32 1,825,808.96 2,825,830.56	32		
33 1,825,937.51 2,825,593.03	33		
34 1,825,865.74 2,825,676.97	34	1,825,865.74	
35 1,825,785.24 2,825,740.79	35	1,825,785.24	2,825,740.79
36 1,825,697.01 2,825,775.99			2,825,775.99
37 1,825,540.57 2,825,805.20			2,825,805.20
38 1,825,430.19 2,825,736.79			2,825,736.79
39 1,825,357.68 2,825,644.37			
40 1,825,240.76 2,825,570.80			
41 1,825,124.23 2,825,496.66		*	
42 1,824,975.07 2,825,411.52			
43 1,824,890.70 2,825,454.94			
44 1,824,922.74 2,825,330.69 45 1.825,050.20 2.825,327.81		•	
, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			
10			
49 1,825,529.37 2,825,638.33 50 1,825,604.03 2,825,721.59			
51 1,825,718.37 2,825,693.13			
52 1,825,738.58 2,825,622.62			

### TEMPLATE -- Data Required when Logging Boreholes

General Notes: should describe times of arrival, personnel, weather, start and stop times on drillholes, stop time on end of shift. Also include brief descriptions providing salient points regarding conditions, findings, movements, difficulties encountered, etc. Each page should include date and page number.

TIME  DEPTH  in °F  ppm  DEPTH  in °F  ppm  Description  At given depth, every 5 feet interval, and change in inthologic type, temperature, content  CO, or water content  CO, or water content  Description  At every 5 feet interval, change in material, or measured parameters  parameters  At every 5 feet interval, change in material, or measured parameters  At every 5 feet interval, change in material, or measured parameters  At any sign of meters have lower Explosive Limit to detect of methane—include if available  At any sign of meters have lower Explosive Limit to detect of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of meters have content of methane—include if available  At any sign of methane of in water-lower Explosive Limit to detect of methane—include if available  At any sign of methane of in water-loved in water loved in w								
At given depth, every 5 feet, additionally at every change in lithologic type, temperature, CO, or water content lithologic type, temperature, temperature, temperature, content lithologic type, temperature, temperature, temperature, temperature, content lithologic type, temperature, tempe	TIME	DEPTH			Limit (LEL), in	Static	l	
	depth, every 5 feet interval, and change in lithologic type, temperature, CO, or water	feet, additionally at every change in material type, temp, CO, or water	feet interval, change in material, or measured	feet interval, change in material, or measured	meters have Lower Explosive Limit to detect presence of methane include if	in water- bearing strata. change rate of water influx, or change in water level in	percent, col gas, steam, any othe releva investigati content may	or, presence of odor, water, or r properties nt to the on. Moisture be described as
					4			
	+		· ·					

Laborers' and Mechanics' Minimum Rates of Pay can be found at

http://labor.alaska.gov/lss/forms/pamp600-090117.pdf

Refer to Wage & Hour Administration Pamphlet No. 600, Issue 35 with errata.

Davis-Bacon Wages can be found at:

https://www.wdol.gov/wdol/scafiles/davisbacon/ak.html