

**RFQ# ADSPO14-00003465, Annual Request for Qualifications and Experience  
REVISED - Attachment I – General Qualifications**

*(If a firm has branch offices, complete for each specific branch office seeking work.)*

**1. REVISED ADSPO13-00003465: Annual Request for Qualifications**

a.	FIRM (OR BRANCH OFFICE) NAME:	JBR Environmental Consultants, Inc.
b.	FIRM (OR BRANCH OFFICE) STREET:	1553 West Elna Rae
c.	FIRM (OR BRANCH OFFICE) CITY:	Tempe
d.	FIRM (OR BRANCH OFFICE) STATE:	Arizona
e.	FIRM (OR BRANCH OFFICE) ZIP CODE:	85281
f.	YEAR ESTABLISHED:	1985
(g1).	OWNERSHIP - TYPE:	Corporation
(g2).	OWNERSHIP - SMALL BUSINESS STATUS:	JBR is not a small business
h.	POINT OF CONTACT NAME AND TITLE:	Martin J. Minter, Geologist/Project Manager
i.	POINT OF CONTACT TELEPHONE NUMBER:	480-829-0457, ext. 227
j.	POINT OF CONTACT E-MAIL ADDRESS:	mminter@jbrenv.com
k.	NAME OF FIRM <i>(If block 1a is a branch office):</i>	JBR Environmental Consultants, Inc.



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**3. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST YEAR**

a. Approximate No. of Projects	b. Experience	c. Revenue Index Number <i>(see below)</i>
228	Air Pollution Control	6
95	Environmental Impact Studies, Assessments or Statements	6
105	Phase I Environmental	3
12	Soils and Geological Studies; Foundations	3
94	Storm Water Handling & Facilities	4
102	Testing & Inspection Services	5
30	Water Resources; Hydrology; Ground Water	4
40	Zoning; Land Use Studies	3

**PROFESSIONAL SERVICES REVENUE INDEX NUMBER**

- |   |   |
|---|---|
| 1. Less than \$100,000                  | 6. \$2 million to less than \$5 million   |
| 2. \$100,000 to less than \$250,000     | 7. \$5 million to less than \$10 million  |
| 3. \$250,000 to less than \$500,000     | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million   | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater               |

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**4. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT (Complete one Section 4 for each key person.)**

a. NAME <b>Louis Thanukos, PhD</b>	b. ROLE IN THIS CONTRACT <b>Senior Engineer</b>	c. YEARS EXPERIENCE	
		1. TOTAL <b>39</b>	2. WITH CURRENT FIRM <b>39</b>
d. FIRM NAME AND LOCATION (City and State) <b>JBR Environmental Consultants, Inc., Tempe, Arizona</b>			
e. EDUCATION (DEGREE AND SPECIALIZATION) <b>Ph.D., Physics, M.S., Physics, B.A., Physics</b>		f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Bajza, C. A., T. Lay, K. W. Scoular, L.C. Thanukos and J.A. Taylor 1979. <i>Measurement of Visibility in the Petrified Forest National Park, Arizona</i> . Proceedings of APCA Specialty Conference on VIEW ON VISIBILITY - REGULATORY AND SCIENTIFIC, Denver, Colorado, p. 243-256.  Thanukos, L. C., J. A. Taylor and K. W. Scoular 1981. <i>Particulate Loading and Size Characteristics During Dust Storm Events</i> . 74th Annual Meeting of APCA, Philadelphia, Pennsylvania, Paper No. 81.14.3.  Thanukos, L. C. and J. A. Taylor 1981. <i>Visibility and Land Use in the Sonoran Desert</i> . Fourth Annual Applied Geography Conference, October 22-24, Tempe, Arizona.  Thanukos, L. C., 1990. <i>Air Quality in the Phoenix Urban Area</i> . Symposium on Landscape Ecology: Planning and Design Implications, February 17, Tempe, Arizona.  Thanukos, L. C., T. Miller, C. V. Mathai, D. Reinholt, and J. Bennett 1992. <i>Intercomparison of PM<sub>10</sub> Samplers and Source Apportionment of Ambient PM<sub>10</sub> Concentrations in the Rillito, Arizona Group I Area</i> . International Specialty Conference on PM <sub>10</sub> Standards and Nontraditional Particulate Source Controls. AWMA/EPA Conference, January 12-15, Scottsdale, Arizona.			

**H. RELEVANT PROJECTS**

(1) TITLE AND LOCATION (City and State) Abengoa Solar: Solana Generating Station - Application for first non-Title V air permit; Gila Bend, AZ	(2) Year Completed	
	Professional Services <b>2012-2013</b> <b>Air Pollution Control</b>	Construction (if applicable)
1) (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Abengoa Solar planned to build, operate, and maintain a 250 MW concentrating solar power (CSP) electrical generating plant, Solana Generating Station (Solana) near Gila Bend, Arizona. The innovative nature of Abengoa Solar's CSP and thermal energy storage technology required updates to the design of the facility as new information from research and pilot plants was obtained. Dr. Thanukos managed all of the personnel and resources for first non-Title V air permit for the site and subsequent revision, based on new information. Approximately \$ 248,000.		
(1) TITLE AND LOCATION (City and State) Nucor Corporation, Nucor Steel, Norfolk Nebraska  Preparation of a PSD Application Norfolk, Nebraska	(2) Year Completed	
	Professional Services <b>2012-2013</b> <b>Air Pollution Control</b>	Construction (if applicable)
2) (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Nucor manufactures high quality steel by recycling scrap metal via a twin-shell electric arc furnace. In support of Nucor's PSD application to increase production, Dr. Thanukos managed all of the personnel and resources for preparation of the PSD Application, including discussions with the Nebraska Department of Environmental Quality to ensure agreement with the methodology. Approximately \$200,000.		
(1) TITLE AND LOCATION (City and State) Freeport-McMoRan Copper & Gold, Inc., Freeport-McMoRan Morenci Inc. Preparation of a Title V Renewal Application Morenci, Arizona	(2) Year Completed	
	Professional Services <b>2012-2013</b> <b>Air Pollution Control</b>	Construction (if applicable)

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	<p>(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE</p> <p>The Freeport-McMoRan Morenci copper mine, considered the largest copper mine in the U.S., operates under a Title V Air Quality Permit. The facility is a non-categorical source with a PSD combined cycle power plant and minor PSD boiler operations embedded within the source. Dr. Thanukos managed all of the personnel and resources for preparation of the Title V Air Permit Renewal Application. Preparation of the application included collaboration with the client to incorporate alternate operating scenarios for operational flexibility and to assure that the application included the most up to date information and is submitted according to the planned time frame. Approximately \$150,000.</p>	<input checked="" type="checkbox"/> Check if project performed with current firm			
4)	<p>(1) TITLE AND LOCATION (<i>City and State</i>)</p> <p>Rosemont Copper Company, Rosemont Copper Project Preparation of a Class II Air Quality Permit Application Tucson, Arizona</p>	<p>(2) Year Completed</p> <table border="1"> <tr> <td>Professional Services <b>Air Pollution Control</b></td> <td>2012-2013</td> <td>Construction (<i>if applicable</i>)</td> </tr> </table>	Professional Services <b>Air Pollution Control</b>	2012-2013	Construction ( <i>if applicable</i> )
Professional Services <b>Air Pollution Control</b>	2012-2013	Construction ( <i>if applicable</i> )			
	<p>(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE</p> <p>Rosemont Copper Company plans to develop an open pit copper mine and processing operation 30 miles southeast of Tucson, Arizona. The Arizona Department of Environmental Quality (ADEQ) issued an air quality permit for this facility in January 2013. Dr. Thanukos managed all of the personnel and resources for the preparation of the air quality permit application. Dr. Thanukos assisted Rosemont in responding to questions and comments from agencies including EPA, ADEQ, the National Park Service, the Forest Service, and the public to ensure that the permit was issued in a timely manner. Because the Rosemont project also triggered the NEPA process, Dr. Thanukos coordinated the collection of information for the inventories that included non-traditional sources such as tailpipe emissions from all mobile sources. Approximately \$300,000.</p>	<input checked="" type="checkbox"/> Check if project performed with current firm			
5)	<p>(1) TITLE AND LOCATION (<i>City and State</i>)</p> <p>Freeport-McMoRan Copper &amp; Gold, Inc., Freeport-McMoRan Bagdad Inc. Preparation of a Significant Permit Revision Application Bagdad, Arizona</p>	<p>(2) Year Completed</p> <table border="1"> <tr> <td>Professional Services <b>Air Pollution Control</b></td> <td>2012-2013</td> <td>Construction (<i>if applicable</i>)</td> </tr> </table>	Professional Services <b>Air Pollution Control</b>	2012-2013	Construction ( <i>if applicable</i> )
Professional Services <b>Air Pollution Control</b>	2012-2013	Construction ( <i>if applicable</i> )			
	<p>(3) BRIEF DESCRIPTION (<i>Brief scope, size, cost, etc.</i>) AND SPECIFIC ROLE</p> <p>Freeport-McMoRan Bagdad Inc. planned to add an additional operating scenario to its air quality permit in order to increase sulfide ore processing. Dr. Thanukos managed all personnel and resources for preparation of the Significant Permit Review that was submitted to the ADEQ. Approximately \$100,000.</p>	<input checked="" type="checkbox"/> Check if project performed with current firm			

<p>a. NAME</p> <p><b>Mannie Carpenter, PE</b></p>	<p>b. ROLE IN THIS CONTRACT</p> <p><b>Senior Engineer</b></p>	<p>c. YEARS EXPERIENCE</p> <table border="1"> <tr> <td>1. TOTAL</td> <td>2. WITH CURRENT FIRM</td> </tr> <tr> <td align="center"><b>34</b></td> <td align="center"><b>4</b></td> </tr> </table>		1. TOTAL	2. WITH CURRENT FIRM	<b>34</b>	<b>4</b>
1. TOTAL	2. WITH CURRENT FIRM						
<b>34</b>	<b>4</b>						
<p>d. FIRM NAME AND LOCATION (<i>City and State</i>)</p> <p><b>JBR Environmental Consultants, Inc., Tempe, Arizona</b></p>							
<p>e. EDUCATION (<i>DEGREE AND SPECIALIZATION</i>)</p> <p><b>B.S., Nuclear Engineering</b></p>	<p>f. CURRENT PROFESSIONAL REGISTRATION (<i>STATE AND DISCIPLINE</i>)</p> <p><b>Professional Engineer (Environmental) #40264, Arizona</b></p>						
<p>g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)</p> <p>Carpenter, M. L., and J. Nockleby. 2012. <i>In-Stack Measurements of NO<sub>2</sub> Partitions from Various Combustion Sources</i>. Presented at 2012 Gatekeeper Regulatory Roundup Conference, April 2-3, Scottsdale, Arizona.</p> <p>Carpenter, M. L., and J. Nockleby. 2012. <i>In-Stack Measurements of NO<sub>2</sub> Partitions from Various Combustion Sources</i>. Presented at 2012 Electrical Utilities Environmental Conference, January 30 - February 1, Phoenix, Arizona.</p> <p>Carpenter, M. L. 2011. <i>Demonstrating Compliance with Very Low Air Permit VOC Limits</i>. Presented at 2011 Electrical Utilities Environmental Conference, January 31 - February 2, Phoenix, Arizona.</p> <p>Carpenter, M. L. 2009. <i>The ABC's of GHS's</i>. Presented at the Gatekeeper Regulatory Roundup Conference. February 17-18, Scottsdale, Arizona.</p> <p>Carpenter, M. L. 2008. Dust: PM<sub>0-10</sub> Emissions. <i>Journal of Environmental Management Arizona</i>. June/July Vol. 6 No. 3: 6-11.</p>							

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Carpenter, M. L., and S. LeBlanc. 2008. *Got Dust?* Presented at 2008 Gatekeeper Regulatory Roundup Conference, January 28-29, Scottsdale, Arizona.

Carpenter, M. L. 2007. *Is Your Air Quality Permit Costing You Too Much?* Presented at the 2007 Gatekeeper Regulatory Roundup Conference, February 20-21, Scottsdale, Arizona.

Carpenter, M. L. 2006. *Air Quality 101.* Presented at the 2006 Gatekeeper Regulatory Roundup Conference, February 21-22, Scottsdale, Arizona.

**MSHA Training**

**H. RELEVANT PROJECTS**

1)	(1) TITLE AND LOCATION <i>(City and State)</i> Apache Nitrogen, Benson, Arizona	(2) Year Completed	
		Professional Services <b>Ongoing</b> <b>Air Pollution Control</b>	Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Carpenter oversaw the performance testing of multiple air emissions sources and control equipment. Approximately \$350,000.		
2)	(1) TITLE AND LOCATION <i>(City and State)</i> Intel, Semi- Conductor Manufacturing facility in Chandler, Arizona	(2) Year Completed	
		Professional Services <b>Ongoing</b> <b>Air Pollution Control</b>	Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Carpenter oversaw the performance testing of acid scrubbers and thermal oxidizers. He also prepared the test reports. Approximately \$35,000.		
3)	(1) TITLE AND LOCATION <i>(City and State)</i> Freeport-McMoRan, Bagdad, Arizona	(2) Year Completed	
		Professional Services <b>2013</b> <b>Air Pollution Control</b>	Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Carpenter oversaw the performance testing of baghouse emissions. He also prepared the test reports. Approximately \$100,000.		
4)	(1) TITLE AND LOCATION <i>(City and State)</i> Confidential Copper Mine Tucson, Arizona	(2) Year Completed	
		Professional Services <b>2013</b> <b>Air Pollution Control</b>	Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Carpenter oversaw the engineering testing of acid emissions from facility equipment. Approximately \$35,000.		
5)	(1) TITLE AND LOCATION <i>(City and State)</i> HEXCEL, Casa Grande, Arizona	(2) Year Completed	
		Professional Services <b>Ongoing</b> <b>Air Pollution Control</b>	Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Carpenter oversaw the emission testing of 3 thermal oxidizers. He also prepared the test reports. Approximately \$13,000.		

a. NAME <b>Martin J. Minter, PG, RG, CRS, CEM</b>	b. ROLE IN THIS CONTRACT <b>Senior Geologist/Environmental Project Manager</b>	c. YEARS EXPERIENCE	
		1. TOTAL <b>23</b>	2. WITH CURRENT FIRM <b>1</b>
d. FIRM NAME AND LOCATION <i>(City and State)</i> <b>JBR Environmental Consultants, Inc., Tempe, Arizona</b>			

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<p>e. EDUCATION (DEGREE AND SPECIALIZATION)</p> <p><b>M.S., Environmental Management, B.S., Geology</b></p>	<p>f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)</p> <p><b>Registered Geologist #31663 (Arizona), Certified Remediation Specialist #35824 (Arizona), Professional Geologist #8764 (CA), #664-13 (WI), Certified Environmental Manager #2293 (NV)</b></p>
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g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Minter, M . 2003. Critical Analysis of the Possible Environmental Factors Leading to the Spread of West Nile Virus. Presented and defended at Arizona State University (East), December 12 in Mesa, Arizona.

Excerpts of Mr. Minter’s thesis were also published in the Spring 2005 issue of ArcUser Magazine and also published on-line at [http://www.esri.com/news/arcuser/0205/west\\_nile1of2.html](http://www.esri.com/news/arcuser/0205/west_nile1of2.html)

Minter, M. 1999. Hydrogeologic Study of the Clear Creek Pines Community and Blue Ridge Ranger Station. Presented to the ADEQ, ADWR, and numerous private well owners in May.

Minter, M. 1990. Siting and Construction of a Hazardous Waste Landfill in the State of California. Presented at California State University, Northridge in December.

Certification in Geographic Information Systems (Penn State University)  
40-Hour HAZWOPER and recent 8-Hour Refresher Training  
MSHA training  
DOT HM-181 Hazmat Course  
RCRA Hazardous Waste Generator Training

Vice President, Environmental Professionals of Arizona

**H. RELEVANT PROJECTS**

<p>(1) TITLE AND LOCATION (City and State)</p> <p>NORD Resources, Johnson Camp Mine, Dragoon, Arizona</p>	<p>(2) Year Completed</p>	
<p>1) (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</p> <p>Mr. Minter evaluated the aquifer protection permit needs for NORD’s Johnson Camp Mine, including an evaluation of the geologic and hydrogeologic conditions for the Dragoon area. Mr. Minter created a geodatabase for the site, as part of developing the Site Conceptual Model. Approximately \$60,000.</p>	<p>Professional Services <b>2013</b> <b>Water Resources and Geological Studies</b></p>	<p>Construction (if applicable) (Not Applicable)</p>
<p align="right"><input checked="" type="checkbox"/> Check if project performed with current firm</p>		
<p>(1) TITLE AND LOCATION (City and State)</p> <p>City of Mesa, Various Electrical Substation Properties in Mesa</p>	<p>(2) Year Completed</p>	
<p>2) (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</p> <p>Mr. Minter oversaw the Phase II ESA sampling activities for 3 electrical substation properties and the preparation of Phase II ESA reports (YTD \$5K). The City just approved JBR’s proposal to complete Phase II ESAs for two additional properties (\$4,200) and JBR is in the process of scoping out a cost proposal to conduct Phase II ESA sampling 3 additional electrical substation properties (Estimated to be an additional \$5K).</p>	<p>Professional Services <b>2013</b> <b>Testing and Inspection</b></p>	<p>Construction (if applicable) (Not Applicable)</p>
<p align="right"><input checked="" type="checkbox"/> Check if project performed with current firm</p>		
<p>(1) TITLE AND LOCATION (City and State)</p> <p>Greenwood Memory Lawn, Phoenix, AZ</p>	<p>(2) Year Completed</p>	
<p>3) (3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE</p> <p>Assisted with the review information from a historic leaking underground storage tank (LUST) that had previously stored both diesel fuel and gasoline. A number of cleanup actions had been completed at the site, but had no associated regulatory agency documentation. Provided a sampling and analysis plan for soil and groundwater at the former tank location. Oversaw the completion of soil and groundwater confirmation samples that indicated contamination at the site had been reduced below regulatory levels.</p>	<p>Professional Services <b>2013</b> <b>Testing and Inspection</b></p>	<p>Construction (if applicable) (Not Applicable)</p>
<p align="right"><input checked="" type="checkbox"/> Check if project performed with current firm</p>		

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Assisted with the LUST case closure request for the site that was subsequently approved by the agency. Approximately \$10,000		
4)	(1) TITLE AND LOCATION <i>(City and State)</i> Arizona Landfill, LLC, Phoenix, Arizona	(2) Year Completed Professional Services <b>2013</b> <b>Water Resources</b>
		Construction <i>(if applicable)</i>
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Revised the Stormwater Pollution Prevention Plan (SWPPP) for the site based on new information for the site (Approx. \$3,000).		
5)	(1) TITLE AND LOCATION <i>(City and State)</i> Abengoa Solar: Solana Generating Station; Gila Bend, AZ	(2) Year Completed Professional Services <b>2013</b> <b>Water Resources and Geological Studies</b>
		Construction <i>(if applicable)</i>
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Minter evaluated the aquifer protection permit needs for Solana Generating facility, including an evaluation of the geologic and hydrogeologic conditions for the area. Mr. Minter created a geodatabase for the site, as part of developing the Site Conceptual Model. Approximately \$248,000		

a. NAME <b>Debra Lemke, PWS, CPESC</b>	b. ROLE IN THIS CONTRACT <b>Wetland Scientist</b>	c. YEARS EXPERIENCE	
		1. TOTAL <b>18</b>	2. WITH CURRENT FIRM <b>3</b>

d. FIRM NAME AND LOCATION <i>(City and State)</i> <b>JBR Environmental Consultants, Inc., Reno, Nevada</b>
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e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> <b>B.S. Environmental Science</b>	f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> <b>Professional Wetland Scientist</b>
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g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)

Lemke, D., 2009. Federal and State of Nevada Stormwater Program and Inspection Readiness. Presented at the Current Issues in Storm Water Regulation seminar, September 23, Reno, Nevada.

Lemke, D. and G. Hurban. 2008. Steamboat Creek Restoration and Flood Management Field Tour. Presented at the Association of State Floodplain Managers Conference, May 22, in Sparks, Nevada.

Lemke, D., L. Coston, L. Carpenter, A. Dodd, Ph.D., P. Whitaker 2007. Comparison of Avian Monitoring Surveys at a Compensatory Wetland Mitigation Site Against Avian Monitoring Surveys in the Great Basin. Presented at the Society of Wetland Scientists International Conference, June 14, in Sacramento, California.

Lemke, D., L. Coston, A. Dodd. 2007. A Case Study: Gauging Various Construction Techniques and Methods Against Overall Success Criteria and Habitat Functions in Mitigation Wetlands. Presented at the Society of Wetland Scientists International Conference, June 12, in Sacramento, California.

Lemke, D., P. Whitaker, L. Carpenter, L. Coston, A. Dodd, Ph.D. 2007. A Case Study: Evaluating Results from Avian Monitoring as a Long-Term Measurement of Success Criteria in Mitigated Wetlands. Presented at the Society of Wetland Scientists International Conference, June 14 in Sacramento, California.

Lemke, D., P. Whitaker, M. Coker. 2006. Types of Waters of the United States. Presented at the University of Nevada, May 17, in Reno, Nevada.

Lemke, D., 2006. Methods for Determining Wetland Vegetation for a Comprehensive Approach for a Wetland Delineation. Presented at the University of Nevada, May 3, in Reno, Nevada.

Lemke, D., P. Di Loreto. 2004. Integrating Natural Drainage into Flood Control at Damonte Ranch. Presented at the American Water Resources Association's Annual Conference, December 2004, in Reno, Nevada.

**H. RELEVANT PROJECTS**

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	(1) TITLE AND LOCATION <i>(City and State)</i> Project Manager / Tonopah, Nevada	(2) Year Completed	
		Professional Services <b>2013</b> <b>Water Resources</b>	Construction <i>(if applicable)</i>
1)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Gemfield Project Waters of the United States (WOUS) Delineation, International Minerals, Nevada. Ms. Lemke was the Project Manager for the Gemfield Project WOUS, including wetlands WOUS delineation. The 2,740 acre delineation was performed using the United States Army Corps of Engineers Wetland Delineation Manual (Corps, 1987), Regional Supplement to the Corps of Engineers Wetlands Delineation Manual: Arid West Region Version 2.0, and Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western U.S. The final delineation report and maps were prepared in accordance with the Corps Special Public Notice (August 6, 2012) and submitted to the United States Army Corps of Engineers (USACE) for a Jurisdictional Determination. \$14,500		
	(1) TITLE AND LOCATION <i>(City and State)</i> Project Manager / Reno, Nevada	(2) Year Completed	
		Professional Services <b>2013</b> <b>Water Resources</b>	Construction <i>(if applicable)</i>
2)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Damonte Ranch Wetlands, Confidential Client, Reno, Nevada. Ms. Lemke was the Project Manager on the 2,000 acre Damonte Ranch project. She conducted a WOUS delineation and submitted the results to the USACE for verification. Ms. Lemke prepared and obtained federal and state permitting with respect to proposed WOUS/wetlands impacts for development purposes. Ms. Lemke worked with the Developer to create on-site compensatory mitigation as well as restoration of existing WOUS/wetlands. She participated in the design of federal, state, and local mitigation plans, she provided construction implementation management, and she completed mitigation monitoring and reporting for WOUS/wetlands and over one mile of stream habitat. Ms. Lemke designed and implemented a noxious weed eradication program, an avian monitoring program, and a berm monitoring programs for the project site.		
	(1) TITLE AND LOCATION <i>(City and State)</i> Project Supervisor / Truckee, California	(2) Year Completed	
		Professional Services <b>2013</b> <b>Water Resources</b>	Construction <i>(if applicable)</i>
3)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Timilick Tahoe, Confidential Client, Truckee, California. Ms. Lemke provided erosion and sediment control design, implementation, and best management practices construction oversight for the Timilick Tahoe project. She provided the monitoring, reporting, and management of the projects State of California Environmental Protection Agency, Lahontan Regional Water Quality Control Board permit. Ms. Lemke also conducted water quality sampling for the project site.		
	(1) TITLE AND LOCATION <i>(City and State)</i> Project Manager / Reno, Nevada	(2) Year Completed	
		Professional Services <b>2013</b> <b>Water Resources</b>	Construction <i>(if applicable)</i>
4)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Pleasant Valley Sanitary Sewer, Confidential Client, Reno, Nevada, Project Manager. Ms. Lemke was the project manager on the Pleasant Valley Sanitary Sewer project in Reno, Nevada. Ms. Lemke conducted a WOUS delineation and submitted the results to the USACE for a verification. She also prepared and submitted USACE and State of Nevada Division of Environmental Protection permits for the project.		
	(1) TITLE AND LOCATION <i>(City and State)</i> Project Manager / Virginia City, Nevada	(2) Year Completed	
		Professional Services <b>2013</b> <b>Water Resources</b>	Construction <i>(if applicable)</i>
5)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Plum Mine, Comstock Mining, Inc., Silver City and Gold Hill, Nevada. Ms. Lemke conducted a Waters of the United States delineation for the Plum Mine in Silver City. Ms. Lemke also developed a Stream Crossing Guidance document for future reclamation purposes. Plum Mine is roughly 6,000 acres. \$206,000		

a. NAME <b>Jamie Wilson, PE</b>	b. ROLE IN THIS CONTRACT <b>Permit Engineer</b>	c. YEARS EXPERIENCE	
		1. TOTAL <b>11</b>	2. WITH CURRENT FIRM <b>2</b>

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d. FIRM NAME AND LOCATION <i>(City and State)</i> <b>JBR Environmental Consultants, Inc., Tempe, Arizona</b>		
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> <b>B.S., Engineering</b>		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> <b>Professional Engineer (Environmental) #52545, Arizona</b>
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)		
<b>H. RELEVANT PROJECTS</b>		
1)	(1) TITLE AND LOCATION <i>(City and State)</i> Nucor Corporation, Nucor Steel, Norfolk Nebraska Preparation of a PSD Application Norfolk, Nebraska	(2) Year Completed Professional Services <b>2012-2013</b> Construction <i>(if applicable)</i> <b>Air Pollution Control</b>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Nucor manufactures high quality steel by recycling scrap metal via a twin-shell electric arc furnace. In support of Nucor's PSD application to increase production, Ms. Wilson prepared information for modeling assessments to demonstrate protection of air quality standards and PSD Increments. Preparation of the inventories required preparation of a calculation methodology that included all background references and communicating with the Nebraska Department of Environmental Quality to ensure agreement with the methodology. Approximately \$200,000.	
2)	(1) TITLE AND LOCATION <i>(City and State)</i> Abengoa Solar: Solana Generating Station - Application for first non-Title V air permit; Gila Bend, AZ	(2) Year Completed Professional Services <b>2012-2013</b> Construction <i>(if applicable)</i> <b>Air Pollution Control</b>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Abengoa Solar planned to build, operate, and maintain a 250 MW concentrating solar power (CSP) electrical generating plant, Solana Generating Station (Solana) near Gila Bend, Arizona. The innovative nature of Abengoa Solar's CSP and thermal energy storage technology required updates to the design of the facility as new information from research and pilot plants was obtained. Ms. Wilson prepared the first non-Title V air permit for the site. Approximately \$ 248,000.	
3)	(1) TITLE AND LOCATION <i>(City and State)</i> Rosemont Copper Company, Rosemont Copper Project Preparation of a Class II Air Quality Permit Application Tucson, Arizona	(2) Year Completed Professional Services <b>2010 to Present, Air Pollution Control</b> Construction <i>(if applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Rosemont Copper Company plans to develop an open pit copper mine and processing operation 30 miles southeast of Tucson, Arizona. The Arizona Department of Environmental Quality (ADEQ) issued an air quality permit for this facility in January 2013. Ms. Summers created an emission inventory for the facility, identified the applicable air quality regulations, and prepared the synthetic minor Class II permit application for submittal. Ms. Wilson assisted Rosemont in responding to questions and comments from agencies including EPA, ADEQ, the National Park Service, the Forest Service, and the public to ensure that the permit was issued in a timely manner. Because the Rosemont project also triggered the NEPA process, the inventories included non-traditional sources such as tailpipe emissions from all mobile sources. Approximately \$300,000.	
4)	(1) TITLE AND LOCATION <i>(City and State)</i> Lhoist North America, Apex Facility, North Las Vegas, Nevada	(2) Year Completed Professional Services <b>2013</b> Construction <i>(if applicable)</i> <b>Air Pollution Control</b>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The facility uses four rotary kilns to convert limestone into quicklime. JBR conducted air sampling at the facility, and Ms. Wilson prepared the air quality reports for the site. Approximately \$29,000.	
5)	(1) TITLE AND LOCATION <i>(City and State)</i> Apache Nitrogen; Southern, Arizona	(2) Year Completed Professional Services <b>2013</b> Construction <i>(if applicable)</i> <b>Air Pollution Control</b>

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<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p>Ms. Wilson assisted with a Best Available Control Technology (BACT) Analysis for the client that showed continued use of the existing control option was determined to constitute BACT for controlling nitrogen oxide (NOx) emissions from the plant. Ms. Wilson also evaluated the used oil generated at the site in accordance with 40 CFR Part 279. Approximately \$350,000.</p>	<input checked="" type="checkbox"/> Check if project performed with current firm
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<p>a. NAME</p> <p><b>Amber Summers</b></p>	<p>b. ROLE IN THIS CONTRACT</p> <p><b>Permit Engineer</b></p>	<p>c. YEARS EXPERIENCE</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">1. TOTAL</td> <td style="width:50%;">2. WITH CURRENT FIRM</td> </tr> <tr> <td align="center"><b>6</b></td> <td align="center"><b>6</b></td> </tr> </table>		1. TOTAL	2. WITH CURRENT FIRM	<b>6</b>	<b>6</b>
1. TOTAL	2. WITH CURRENT FIRM						
<b>6</b>	<b>6</b>						

d. FIRM NAME AND LOCATION *(City and State)*

**JBR Environmental Consultants, Inc., Tempe, Arizona**

<p>e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i></p> <p><b>B.S., Chemical Engineering</b></p>	<p>f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i></p>
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g. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*

MSHA Training

**H. RELEVANT PROJECTS**

	<p>(1) TITLE AND LOCATION <i>(City and State)</i></p> <p>Rosemont Copper Company, Rosemont Copper Project Preparation of a Class II Air Quality Permit Application Tucson, Arizona</p>	<p>(2) Year Completed</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Professional Services <b>2008 to Present, Air Pollution Control</b></td> <td style="width:50%;">Construction <i>(if applicable)</i> <i>(Not Applicable)</i></td> </tr> </table>		Professional Services <b>2008 to Present, Air Pollution Control</b>	Construction <i>(if applicable)</i> <i>(Not Applicable)</i>
Professional Services <b>2008 to Present, Air Pollution Control</b>	Construction <i>(if applicable)</i> <i>(Not Applicable)</i>				
1)	<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p align="right"><input checked="" type="checkbox"/> Check if project performed with current firm</p> <p>Rosemont Copper Company plans to develop an open pit copper mine and processing operation 30 miles southeast of Tucson, Arizona. The Arizona Department of Environmental Quality (ADEQ) issued an air quality permit for this facility in January 2013. Ms. Summers created an emission inventory for the facility, identified the applicable air quality regulations, and prepared the synthetic minor Class II permit application for submittal. Ms. Summers assisted Rosemont in responding to questions and comments from agencies including EPA, ADEQ, the National Park Service, the Forest Service, and the public to ensure that the permit was issued in a timely manner. Because the Rosemont project also triggered the NEPA process, the inventories included non-traditional sources such as tailpipe emissions from all mobile sources. Approximately \$300,000.</p>				
2)	<p>(1) TITLE AND LOCATION <i>(City and State)</i></p> <p>Freeport-McMoRan Copper &amp; Gold, Inc., Freeport-McMoRan Morenci Inc. Preparation of a Title V Renewal Application Morenci, Arizona</p>	<p>(2) Year Completed</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">Professional Services <b>2013 Air Pollution Control</b></td> <td style="width:50%;">Construction <i>(if applicable)</i> <i>(Not Applicable)</i></td> </tr> </table>		Professional Services <b>2013 Air Pollution Control</b>	Construction <i>(if applicable)</i> <i>(Not Applicable)</i>
Professional Services <b>2013 Air Pollution Control</b>	Construction <i>(if applicable)</i> <i>(Not Applicable)</i>				
<p>(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE</p> <p align="right"><input checked="" type="checkbox"/> Check if project performed with current firm</p> <p>The Freeport-McMoRan Morenci copper mine, considered the largest copper mine in the U.S., operates under a Title V Air Quality Permit. The facility is a non-categorical source with a PSD combined cycle power plant and minor PSD boiler operations embedded within the source. Ms. Summers prepared the renewal application by evaluating all operations, creating an emission inventory, identifying the applicable air quality regulations, and incorporating all required information into a complete application for submittal to the permitting agency. Preparation of the application included collaboration with the client to incorporate alternate operating scenarios for operational flexibility and to assure that the application included the most up to date information and is submitted according to the planned time frame. Following the original submittal of the application, Ms. Summers submitted an amendment to incorporate future changes to the facility and prepared a draft permit to aid the agency in preparation and issuance of the Title V Permit. Approximately \$150,000.</p>					

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3)	(1) TITLE AND LOCATION <i>(City and State)</i> Nucor Corporation, Nucor Steel, Norfolk Nebraska Preparation of a PSD Application Norfolk, Nebraska	(2) Year Completed	
		Professional Services <b>2012-2013 Air Pollution Control</b>	Construction <i>(if applicable)</i> <b>(Not Applicable)</b>
3)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Nucor manufactures high quality steel by recycling scrap metal via a twin-shell electric arc furnace. In support of Nucor's PSD application to increase production, Ms. Summers prepared potential to emit, baseline, and increment emission inventories for modeling assessments to demonstrate protection of air quality standards and PSD Increments. Preparation of the inventories required preparation of a calculation methodology that included all background references and communicating with the Nebraska Department of Environmental Quality to ensure agreement with the methodology. Approximately \$200,000.		
4)	(1) TITLE AND LOCATION <i>(City and State)</i> Freeport-McMoRan Copper & Gold, Inc., Freeport-McMoRan Bagdad Inc. Preparation of a Significant Permit Revision Application Bagdad, Arizona	(2) Year Completed	
		Professional Services <b>2009 to Present, Air Pollution Control</b>	Construction <i>(if applicable)</i> <b>(Not Applicable)</b>
4)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Freeport-McMoRan Bagdad Inc. planned to add an additional operating scenario to its air quality permit in order to increase sulfide ore processing. Ms. Summers created an emission inventory for the additional operating scenario, identified the additional applicable air quality regulations, prepared the permit revision application, and submitted it to the ADEQ. In the application, Ms. Summers restructured multiple emission caps in order for Freeport-McMoRan Bagdad Inc. to remain a synthetic Class II source. Approximately \$100,000.		
5)	(1) TITLE AND LOCATION <i>(City and State)</i> Apache Nitrogen Preparation of Amended Annual Emission Inventories Southeastern Arizona	(2) Year Completed	
		Professional Services <b>2011 to Present, Air Pollution Control</b>	Construction <i>(if applicable)</i> <b>(Not Applicable)</b>
5)	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The client's prior inventories submitted to the regulatory agency had been prepared by multiple personnel and included incorrect/inconsistent methods of calculating emissions from year-to-year. Inventories of actual emissions represent one criterion in determining the appropriate permitting process for subsequent modifications to a facility and whether a specific change would require the PSD or non-PSD permit process. Ms. Summers reviewed all operations at the facility, identified appropriate emission factors, obtained relevant process rates and prepared amendments to prior inventory submittals to the regulatory agency. Approximately \$350,000.		

a. NAME <b>Kathy Houed, EIT</b>	b. ROLE IN THIS CONTRACT <b>Permit Engineer</b>	c. YEARS EXPERIENCE	
		1. TOTAL <b>16</b>	2. WITH CURRENT FIRM <b>1</b>
d. FIRM NAME AND LOCATION <i>(City and State)</i> <b>JBR Environmental Consultants, Inc., Tempe, Arizona</b>			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> <b>B.S., Mechanical Engineering</b>		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> <b>Engineer-in-Training #06646 (Arizona)</b>	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)			

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H. RELEVANT PROJECTS		
1)	(1) TITLE AND LOCATION <i>(City and State)</i> American Fence Company of Arizona: American Tube & Pipe Permitting Project - MCAQD Non-Title V Permit Application; Phoenix, AZ.	(2) Year Completed
		Professional Services <b>2013</b> Air Pollution Control
		Construction <i>(if applicable)</i> <i>(Not Applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE As the Project Engineer, Ms. Houed prepared the permit application and supporting documentation for a non-Title V air quality permit for the client which included existing fencing operations and a new tube manufacturing process. This was an accelerated permitting process so the facility could begin manufacturing tubing as quickly as possible. She prepared notification documents to meet the requirements of two federal National Emissions Standards for Hazardous Air Pollutant (NESHAP) standards and provided the facility with assistance regarding new visible emissions requirements. Approximately \$17,000.	<input checked="" type="checkbox"/> Check if project performed with current firm
2)	(1) TITLE AND LOCATION <i>(City and State)</i> Freeport-McMoRan Safford Inc; Copper Recovery Optimization Permitting Project – ADEQ Class II Minor Permit Revision Application; Safford, AZ.	(2) Year Completed
		Professional Services <b>2013</b> Air Pollution Control
		Construction <i>(if applicable)</i> <i>(Not Applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE As the Project Engineer, Ms. Houed prepared the permit revision application for the copper recovery optimization project from leaching operations that included expansion of the ore conveyance system, installation of a leach pad air injection system, an increase raffinate pumping capacity, and installation of two additional settlers for the SX plant. Approximately \$152,000.	<input checked="" type="checkbox"/> Check if project performed with current firm
3)	(1) TITLE AND LOCATION <i>(City and State)</i> Rosemont Copper Company: Rosemont Copper Project – ADEQ PM <sub>10</sub> & Meteorological Monitoring QAPPs; Tucson, AZ.	(2) Year Completed
		Professional Services <b>2013</b> Air Pollution Control
		Construction <i>(if applicable)</i> <i>(Not Applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE As the Project Engineer, Ms. Houed prepared extensive revisions to the particulate matter equal to or less than 10 microns in aerodynamic diameter (PM <sub>10</sub> ) and Meteorological Monitoring Quality Assurance Project Plans (QAPPs) to meet the requirements of ADEQ and ensure a successful monitoring program. Approximately \$300,000.	<input checked="" type="checkbox"/> Check if project performed with current firm
4)	(1) TITLE AND LOCATION <i>(City and State)</i> CMC Steel Arizona: Compliance Assistance Project – Compliance Certification Project; Mesa, AZ.	(2) Year Completed
		Professional Services <b>2013</b> Air Pollution Control
		Construction <i>(if applicable)</i> <i>(Not Applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE As the Project Engineer, Ms. Houed worked with the client to develop a comprehensive compliance tool for this facility. The tool consists of a multi-tab Excel spreadsheet that contains a complete set of permit conditions cross-referenced to all permit conditions that contain monitoring, recordkeeping, and reporting requirements and all associated documents necessary to demonstrate compliance. Separate tabs contain lists of documents by type and compliance requirements by activity frequency are cross-referenced to the permit conditions where they are referenced and color-coded for the type of activity. The applicable MACT Standard, work practice standards, and permit tables of emission limits, controls, and requirements are contained in additional tabs for easy reference. During this process, Ms. Houed identified several inaccurate permit conditions for correction by permit revision. Approximately \$35,000.	<input checked="" type="checkbox"/> Check if project performed with current firm
5)	(1) TITLE AND LOCATION <i>(City and State)</i> Apache Nitrogen, Environmental Protection Agency (EPA) BACT Analysis; Southern Arizona.	(2) Year Completed
		Professional Services <b>2013</b> Air Pollution Control
		Construction <i>(if applicable)</i> <i>(Not Applicable)</i>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE As the Project Engineer, Ms. Houed prepared a Best Available Control Technology (BACT) Analysis for the client that showed continued use of the existing control option was determined to constitute BACT for controlling nitrogen oxide (NOx) emissions from the plant. Other control option candidates were determined to be technically infeasible due to the plant's unique design characteristics. Approximately \$350,000.	<input checked="" type="checkbox"/> Check if project performed with current firm

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a. NAME <b>Kathleen Vance, P.E.</b>		b. ROLE IN THIS CONTRACT <b>Senior Engineer</b>		c. YEARS EXPERIENCE	
				1. TOTAL <b>14</b>	2. WITH CURRENT FIRM <b>2</b>
d. FIRM NAME AND LOCATION (City and State) <b>JBR Environmental Consultants, Inc., Tempe, Arizona</b>					
e. EDUCATION (DEGREE AND SPECIALIZATION) <b>B.S. Environmental Engineering</b>			f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE) <b>Professional Engineer (Environmental) #41036, Arizona</b>		
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) 40-Hour HAZWOPER training and 8-hour refresher training, and MSHA training					
<b>H. RELEVANT PROJECTS</b>					
	(1) TITLE AND LOCATION (City and State) Apache Nitrogen, Benson, Arizona			(2) Year Completed	
				Professional Services <b>2011 to Present, Air Pollution Control</b>	Construction (if applicable) (Not Applicable)
1)	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Senior Engineer - Class I Air Quality Permit support including preparation and submittal of a Class I Permit renewal application, preparation of multiple minor and significant permit modificans to revise process information or add new equipment, preparation of facility annual emission inventories, and review and analysis of source test data, and CEMS data to determine compliance with permitted emission limits. Approximately \$350,000.			<input checked="" type="checkbox"/> Check if project performed with current firm	
2)	(1) TITLE AND LOCATION (City and State) CalPortland Rillito Cement Plant, Rillito, AZ			(2) Year Completed	
				Professional Services <b>2011 to Present, Air Pollution Control</b>	Construction (if applicable) (Not Applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Preparation of significant and minor permit revision applications, annual emission inventory preparation, review and revision of historic emission factor and source testing data, and review and analysis of CEMS data. Approximately \$100,000			<input checked="" type="checkbox"/> Check if project performed with current firm	
3)	(1) TITLE AND LOCATION (City and State) Gowan Milling, LLC, Yuma, AZ			(2) Year Completed	
				Professional Services <b>2011 to Present, Water Resources and Air Pollution Control</b>	Construction (if applicable) (Not Applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Assisted client with updates to the facility's SPCC plan, Class II Air permit renewal, evaluation of the need for an air quality permit for a new research and development facility, and preparation of permit revisions to incorporate new equipment, processes, or chemicals used during manufacturing at the facility. Approximately \$15,000.			<input checked="" type="checkbox"/> Check if project performed with current firm	
4)	(1) TITLE AND LOCATION (City and State) Greenwood Memory Lawn, Phoenix, AZ			(2) Year Completed	
				Professional Services <b>2012 - 2013, Testing &amp; Inspection Services, Soils and Geological Studies</b>	Construction (if applicable) (Not Applicable)
	(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE Reviewed information from a historic leaking underground storage tank (LUST) that had previously stored both diesel fuel and gasoline. A number of cleanup actions had been completed at the site, but had no associated regulatory agency documentation. JBR provided a sampling and analysis plan for soil and groundwater at the former tank location. A soil boring was completed at the site, and soil and groundwater samples showed contamination at the site had been reduced below regulatory levels. JBR assisted the client in obtaining LUST site closure. Approximately \$10,000.			<input checked="" type="checkbox"/> Check if project performed with current firm	
5)	(1) TITLE AND LOCATION (City and State) City of Mesa, Various Electrical Substation Properties in Mesa			(2) Year Completed	
				Professional Services <b>2013 to Present, Testing &amp; Inspection</b>	Construction (if applicable)

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	Services	<i>(Not Applicable)</i>
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <span style="float:right"><input checked="" type="checkbox"/> Check if project performed with current firm</span> Conducted the Phase II ESA sampling activities for 3 electrical substation properties and assisted with the preparation of Phase II ESA reports (YTD \$5K).		

a. NAME <b>Jill Hankins</b>	b. ROLE IN THIS CONTRACT <b>Professional Wetland Scientist, NEPA Specialist, Biologist</b>	c. YEARS EXPERIENCE	
		1. TOTAL <b>16</b>	2. WITH CURRENT FIRM <b>2</b>

d. FIRM NAME AND LOCATION *(City and State)*  
**JBR Environmental Consultants, Inc., Tempe, Arizona**

e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> <b>B.S. Environmental Science</b>	f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> <b>Professional Wetland Scientist, Wetland Science</b>
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g. OTHER PROFESSIONAL QUALIFICATIONS *(Publications, Organizations, Training, Awards, etc.)*  
 US Army Corps of Engineers Certified Wetland Consultant  
 Society of Wetland Scientists, Professional Wetland Scientist  
 US Fish & Wildlife Service, Certified Utah Prairie Dog Biologist  
 US Fish & Wildlife Service, Certified Southwestern Willow Flycatcher Biologist  
 US Fish & Wildlife Service, Certified Mexican Spotted Owl Biologist

**H. RELEVANT PROJECTS**

1)	(1) TITLE AND LOCATION <i>(City and State)</i> US-89 Emergency Repair of Landslide Page, Arizona	(2) Year Completed	
		Professional Services <b>2013 Environmental Statements</b>	Construction <i>(if applicable)</i>
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <span style="float:right"><input checked="" type="checkbox"/> Check if project performed with current firm</span> Completed survey and documentation of material source area to ensure compliance with T&E Species Act, Clean Water Act, and State Historic Preservation Act. Provided ADOT with GPS mapping and GIS files of material source. 65-acres. Contract Amount \$9,000.			

2)	(1) TITLE AND LOCATION <i>(City and State)</i> US-89 Reconstruction, Fredonia, Arizona	(2) Year Completed	
		Professional Services <b>2013 Environmental Statements</b>	Construction <i>(if applicable)</i>
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <span style="float:right"><input checked="" type="checkbox"/> Check if project performed with current firm</span> Completed survey and documentation of material source area to ensure compliance with T&E Species Act, Clean Water Act, and State Historic Preservation Act. Provided ADOT with GPS mapping and GIS files of material source.			

3)	(1) TITLE AND LOCATION <i>(City and State)</i> Las Vegas Wash, Las Vegas, Nevada	(2) Year Completed	
		Professional Services <b>2012 Water Resources; Hydrology</b>	Construction <i>(if applicable)</i>
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <span style="float:right"><input checked="" type="checkbox"/> Check if project performed with current firm</span> Completed USWaters Delineation in compliance with USACE current regulations on ephemeral washes for a In-Luie Fee Mitigation Bank on 25,000 acre parcel of BLM administered land in Clark County, Nevada. Project involved GPS mapping and GIS files of 21-miles of Las Vegas Wash and its ephemeral tributaries. Completed ground proofing of aerial photos and data collecting, report write up for presentation to BLM and USACE. Contract amount \$69,373.			

4)	(1) TITLE AND LOCATION <i>(City and State)</i> Phase I Environmental Site Assessment The Village at Heritage Court Apartments, St. George, Utah	(2) Year Completed	
		Professional Services <b>2012 Phase I Environmental</b>	Construction <i>(if applicable)</i>
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <span style="float:right"><input checked="" type="checkbox"/> Check if project performed with current firm</span> Phase I Environmental Site Assessment in compliance with the ASTM 1527-05 on a 2.3-acre parcel of property for construction of a			

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multi-unit housing development. Contract amount \$5,500.	
(1) TITLE AND LOCATION <i>(City and State)</i> Indian Hills Roadway Reconstruction, St. George, Washington County, Utah	(2) Year Completed
	Professional Services <b>2013</b> Environmental Statements
Construction <i>(if applicable)</i>	
5) (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm
Provided Categorical Exclusion documentation in compliance with Utah Department of Transportation and Federal Highway Administration standards on a roadway reconstruction project. Tasks completed included Threatened & Endangered Species survey for Mojave Desert tortoise, raptor survey, noxious plant survey, US waters survey. Documentation for compliance with State Historic Preservation Act, Clean Water Act, and National Environmental Policy Act. Contract Amount \$24,500.	

a. NAME <b>Stephanie French</b>	b. ROLE IN THIS CONTRACT <b>Project Engineer</b>	c. YEARS EXPERIENCE	
		1. TOTAL <b>14</b>	2. WITH CURRENT FIRM <b>3.5</b>
d. FIRM NAME AND LOCATION <i>(City and State)</i> <b>JBR Environmental Consultants, Inc., Tempe, Arizona</b>			
e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> <b>B.S., Chemical Engineering</b>		f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i>	
g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) 40-Hour HAZWOPER training and 8-hour refresher training, MSHA training, and EPA Method 9 Visible Emissions Training			

**H. RELEVANT PROJECTS**

1) (1) TITLE AND LOCATION <i>(City and State)</i> Abengoa Solar: Solana Generating Station - Application for a Non-Minor Permit Revision to Update Facility Design; Gila Bend, AZ	(2) Year Completed
	Professional Services <b>2012-2013</b> Air Pollution Control
Construction <i>(if applicable)</i> <b>N/A</b>	
3) (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm
Abengoa Solar planned to build, operate, and maintain a 250 MW concentrating solar power (CSP) electrical generating plant, Solana Generating Station (Solana) near Gila Bend, Arizona. The innovative nature of Abengoa Solar's CSP and thermal energy storage technology required updates to the design of the facility as new information from research and pilot plants was obtained. The new information required changes to the Solana Air Quality Permit. As Staff Scientist, Ms French revised process flow diagrams, created a revised emission inventory for the facility, and prepared the non-Title V non-minor permit revision in order to update the permit to reflect the new information and the subsequent changes to the original design of the facility. Ms French assisted the client to respond to questions from the Maricopa County Air Quality Department in a timely manner in order to facilitate issuance of the revised permit. Approximately \$ 248,000.	
2) (1) TITLE AND LOCATION <i>(City and State)</i> United Dairymen of Arizona : Dairy Processing Facility - Application for Renewal of a Non-Title V Permit and Non-Minor Permit Revision; Tempe, AZ	(2) Year Completed
	Professional Services <b>2012-2013</b> Air Pollution Control
Construction <i>(if applicable)</i> <b>N/A</b>	
3) (3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE	<input checked="" type="checkbox"/> Check if project performed with current firm
As Staff Scientist, Ms. French prepared an application for the renewal of a Non-Title V Air Quality Permit for the dairy processing facility. Ms. French assisted the client in discussions with the Maricopa County Air Quality Department by providing background information and supporting documentation for the renewal of the air quality permit and developing limits on Greenhouse Gas (GHG) emissions in order to remain below the Title V threshold. The technical support documents included an assessment of the facility's maximum PTE, and analyses of natural gas usage, and CO, NOx, and GHG emissions. Ms. French also prepared applications for minor and non-minor permit revisions to add new equipment and operational limitations, and assisted the facility with annual emission inventory and GHG reporting. Approximately \$25,000	
3) (1) TITLE AND LOCATION <i>(City and State)</i>	(2) Year Completed

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Nord Resources Corporation: Johnson Camp Mine - Application for Renewal of a Class II Air Quality Permit; Dragoon, AZ		Professional Services <b>2013</b> <b>Air Pollution Control</b>	Construction (if applicable) <b>N/A</b>
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE		<input checked="" type="checkbox"/> Check if project performed with current firm	
As Staff Scientist, Ms. French prepared an application for the renewal of a Class II Air Quality Permit for the copper mining and processing facility. The permit renewal application included a description of facility operations and process flow diagrams, an assessment of the facility's maximum PTE, and a summary of applicable regulatory requirements. As part of the permit renewal services, Ms. French assessed and complied past changes to facility operations, emission inventories, and calculation methodologies. The assessment revealed equipment which had not permitted, and consequently, Ms. French prepared a minor permit revision to incorporate the equipment prior to submittal of the permit renewal application. Ms. French also prepared the facility's annual emissions inventory report. Approximately \$60,000.			
(1) TITLE AND LOCATION (City and State)		(2) Year Completed	
Baker Commodities Inc.: Application for Renewal of a Wastewater Discharge Permit; Phoenix, AZ		Professional Services <b>2012-2013</b> <b>Water Resources</b>	Construction (if applicable) <b>N/A</b>
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE		<input checked="" type="checkbox"/> Check if project performed with current firm	
4) As Staff Scientist, Ms. French prepared an application to renew the wastewater discharge permit for the rendering facility. As part of the renewal application, Ms. French updated the existing stormwater management plan to reflect current facility operations and to include the requirements of the National Pretreatment Program 40 CFR Part 403.8 for slug control plans. Ms. French also assisted the facility with air quality compliance issues including required monthly records, annual and semi-annual reporting, performance testing, and other compliance demonstrations. Approximately \$7,500.			
(1) TITLE AND LOCATION (City and State)		(2) Year Completed	
Biotech Research, Phoenix, Arizona		Professional Services <b>2012</b> <b>Testing &amp; Inspection Services and Water Resources</b>	Construction (if applicable) <b>N/A</b>
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE		<input checked="" type="checkbox"/> Check if project performed with current firm	
5) A Staff Scientist, Ms. French conducted soil sampling and testing activities for an industrial facility located in Phoenix, Arizona to aid in determining the source of chlorinated pesticide contamination detected in the municipal wastewater. Since the facility's operations do not involve the use of chlorinated pesticides, sampling activities were conducted in the vicinity of the facility's discharge point to the municipal sanitary sewer system located near the facility boundary. The results of the soil sampling and testing activities did not identify the presence of the suspected contaminant in the vicinity of the wastewater flume and further investigation by the City identified another source of the contamination. Approximately \$3,700.			

a. NAME	b. ROLE IN THIS CONTRACT	c. YEARS EXPERIENCE	
<b>Michael Sonenberg, PE</b>	<b>Permit Engineer</b>	1. TOTAL	2. WITH CURRENT FIRM
		<b>5</b>	<b>5</b>

d. FIRM NAME AND LOCATION (City and State)
<b>JBR Environmental Consultants, Inc., Tempe, Arizona</b>

e. EDUCATION (DEGREE AND SPECIALIZATION)	f. CURRENT PROFESSIONAL REGISTRATION (STATE AND DISCIPLINE)
<b>B.S. Engineering Management, Minor in Chemical Engineering</b>	<b>Professional Engineer (Environmental) #55736 (Arizona)</b>

g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.)
MSHA Training EPA Method 9 Training Vice-Chair, Air and Waste Management Association, Grand Canyon Section

**H. RELEVANT PROJECTS**

(1) TITLE AND LOCATION (City and State)		(2) Year Completed	
1) Wildcat Silver, Patagonia, Arizona		Professional Services <b>Ongoing</b> <b>Testing &amp; Inspection Services</b>	Construction (if applicable) <b>N/A</b>
(3) BRIEF DESCRIPTION (Brief scope, size, cost, etc.) AND SPECIFIC ROLE		<input checked="" type="checkbox"/> Check if project performed with current firm	
Mr. Sonenberg operated and maintained a meteorological (weather) monitoring station at the site of a prospective open-pit mine,			

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collecting data for air dispersion modeling that may be required for an Air Quality Permit. Mr. Sonenberg preformed semi-annual audits of monitoring equipment, and quarterly data reports for the station. Approximately \$10,000.			
2)	(1) TITLE AND LOCATION <i>(City and State)</i> Republic Services, Apex (near Las Vegas), Nevada	(2) Year Completed Professional Services <b>Ongoing</b> Air Pollution Control	Construction <i>(if applicable)</i> <b>N/A</b>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Sonenberg operated an maintained an air quality monitoring station for Hydrogen Sulfide (H2S) and particulate matter less than 10 microns aerodynamic diameter (PM10) required by the facility's air quality permit. Mr. Sonenberg performed quarterly audits of monitoring equipment, and prepared quarterly reports of data collected. Approximately \$10,000.		
3)	(1) TITLE AND LOCATION <i>(City and State)</i> Confidential Manufacturer, Phoenix, Arizona	(2) Year Completed Professional Services <b>2013</b> Air Pollution Control	Construction <i>(if applicable)</i> <b>N/A</b>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The client operates a mulch and soil amendments manufacturing facility in Phoenix, Arizona that is subject to Maricopa County Air Quality Regulations for Dust Control Plans. When a recent inspection found the dust control plan inadequate, Mr. Sonenberg revised the Dust Control Plan to address the inspector's concerns. Approximately \$5,000.		
4)	(1) TITLE AND LOCATION <i>(City and State)</i> Sierra Research, Sacramento, California; and Arizona Department of Environmental Quality, Phoenix, Arizona	(2) Year Completed Professional Services <b>2013</b> Testing & Inspection Services and Soil Studies	Construction <i>(if applicable)</i> <b>N/A</b>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Sonenberg analyzed 56 soil samples collected by the clients in Pinal County, Arizona for soil moisture and silt content and prepared a report on the findings. Approximately \$5,000.		
5)	(1) TITLE AND LOCATION <i>(City and State)</i> Confidential Manufacturer, Mesa, Arizona	(2) Year Completed Professional Services <b>2013</b> Water Resources	Construction <i>(if applicable)</i> <b>N/A</b>
	(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Mr. Sonenberg prepared a Stormwater Pollution Prevention Plan (SWPPP) to comply with AZPDES requirements for a crumb rubber manufacturing facility. Approximately \$8,800.		

a. NAME <b>Shantanu Kongara</b>	b. ROLE IN THIS CONTRACT <b>Permit Engineer</b>	c. YEARS EXPERIENCE	
		1. TOTAL <b>5</b>	2. WITH CURRENT FIRM <b>5</b>

d. FIRM NAME AND LOCATION <i>(City and State)</i> <b>JBR Environmental Consultants, Inc., Tempe, Arizona</b>
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e. EDUCATION <i>(DEGREE AND SPECIALIZATION)</i> <b>Master of Science - Mechanical Engineering</b>	f. CURRENT PROFESSIONAL REGISTRATION <i>(STATE AND DISCIPLINE)</i> <b>None</b>
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g. OTHER PROFESSIONAL QUALIFICATIONS (Publications, Organizations, Training, Awards, etc.) Kongara, S, Ron Calhoun, Aditya Choukulkar & Marc-Olivier Boldi, January 2012, "Velocity retrieval for coherent Doppler lidar." International Journal of Remote Sensing, Vol. 33, Issue 11, pgs 3596-3613. February 2013 live on-line: <a href="http://www.tandfonline.com/doi/abs/10.1080/01431161.2011.631948">http://www.tandfonline.com/doi/abs/10.1080/01431161.2011.631948</a>
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**H. RELEVANT PROJECTS**

1)	(1) TITLE AND LOCATION <i>(City and State)</i> Rosemont Copper Company, Tucson, Arizona	(2) Year Completed Professional Services <b>2008 to Present, Environmental Impact Studies, Assessments and Statements</b>	Construction <i>(if applicable)</i>
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(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Rosemont copper is a proposed open pit copper mine facility near Tucson. Mr. Kongara conducted dispersion modeling using AERMOD, CALPUFF and VISCREEN as a supplement for the EIS and Permitting Process. Approximately \$300,000.	
2)	(1) TITLE AND LOCATION <i>(City and State)</i> Nucor Steel Corporation, Norfolk, Nebraska
	(2) Year Completed Professional Services <b>2012 – 2013, Environmental Impact Studies, Assessments or Statements</b> Construction <i>(if applicable)</i>
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Nucor manufactures high quality steel by recycling scrap metal via a twinshell electric arc furnace. Mr. Kongara conducted a dispersion modeling analysis to demonstrate protection of the NAAQS and PSD Increment standards as part of the PSD permitting process. Approximately \$200,000.	
3)	(1) TITLE AND LOCATION <i>(City and State)</i> Mineral Park Inc., Golden Valley, Arizona
	(2) Year Completed Professional Services <b>2013, Environmental Impact Studies, Assessments or Statements</b> Construction <i>(if applicable)</i>
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The Mineral Park facility consists of copper ore quarry operations. Mr. Kongara conducted a dispersion modeling analysis to demonstrate protection of the NAAQS in support of the Significant Permit Revision process. Approximately \$50,000.	
4)	(1) TITLE AND LOCATION <i>(City and State)</i> Lhoist North America, Apex Facility, North Las Vegas, Nevada
	(2) Year Completed Professional Services <b>On-Going, Air Pollution Control</b> Construction <i>(if applicable)</i>
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm Lhoist North America operations include a limestone quarry, four lime kilns, a hydrator and several support operations. Mr. Kongara prepared the emissions inventory and completed the permit application for renewal of the Title V application. Approximately \$29,000.	
5)	(1) TITLE AND LOCATION <i>(City and State)</i> Freeport McMoRan-Central Analytical Services Laboratory (CASC), Safford, Arizona
	(2) Year Completed Professional Services <b>2013, Air Pollution Control, Environmental Impact Studies</b> Construction <i>(if applicable)</i>
(3) BRIEF DESCRIPTION <i>(Brief scope, size, cost, etc.)</i> AND SPECIFIC ROLE <input checked="" type="checkbox"/> Check if project performed with current firm The CASC facility analyzes ore samples from Freeport McMoRan facilities around Arizona. Mr. Kongara prepared a Class II permit Application and conducted a dispersion modeling analysis to demonstrate the protection of the NAAQS. Approximately \$7,000.	

**5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT**

*(Present no more than five (5) projects. Complete one Section 5 for each project.)*

**EXAMPLE PROJECT #1**

a. TITLE AND LOCATION <i>(City and State)</i> <b>APS Sun Valley to Morgan 500/230kV Transmission Line Environmental Impact Statement, BLM - Phoenix, Arizona</b>	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES <b>(2011 – Present) Environmental Impact Studies, Water Resources, Zoning and Land Use Study</b>	CONSTRUCTION <i>(if applicable)</i> <b>Not Applicable</b>

**23. PROJECT OWNER'S INFORMATION**

c. PROJECT OWNER <b>Arizona Public Service Company</b>	d. DOLLAR AMOUNT OF PROJECT <b>\$950,000</b>	e. TOTAL COST OF PROJECT <b>\$950,000</b>
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f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

JBR was contracted by Arizona Public Service Company (APS) to conduct an EIS for a proposed transmission line from the Morgan to Sun Valley Substations. APS proposed construction of this major power line through the Bureau of Land Management (BLM) and private land holdings north of Phoenix, Arizona. The project's visual impacts and land use authorizations would require amending the current BLM Resource Management Plan (RMP) for the affected area of public land. As this same public land is currently preserved for visual and recreational resources in the RMP, the change of land use to this industrial purpose is controversial. JBR prepared highly detailed visual impacts analyses for this project including simulated drive-throughs to evaluate the impacts of the project on scenic resources. JBR also prepared the Draft and Final EIS documents which included impact analysis from the construction activities and long-term operation of the transmission line. Resources analyzed included: air resources (including climate change and greenhouse gas emissions), water resources (including wetlands), vegetation resources, wildlife, recreation, livestock grazing, land use, socioeconomics, soils, visuals, cultural resources, public health and safety, and hazardous materials.

<b>5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT</b> <i>(Present no more than five (5) projects. Complete one Section 5 for each project.)</i>		
<b>EXAMPLE PROJECT #2</b>		
<b>a. TITLE AND LOCATION (City and State)</b> <b>Johnson Camp Mine, Dagoon, Arizona</b>	<b>b. YEAR COMPLETED</b>	
	<b>PROFESSIONAL SERVICES (2011 – Present)</b> <b>Air Pollution Control and Water Resources</b>	<b>CONSTRUCTION (If applicable)</b> <b>Not Applicable</b>
<b>23. PROJECT OWNER'S INFORMATION</b>		
<b>c. PROJECT OWNER</b> <b>NORD Resources</b>	<b>d. DOLLAR AMOUNT OF PROJECT</b> <b>\$60,000</b>	<b>e. TOTAL COST OF PROJECT</b> <b>\$60,000</b>

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

JBR conducted air quality permitting, permit revisions, air modeling, emission inventory reporting, and submittal of the TRI reports for the Johnson Camp Mine since 2011. JBR recently evaluated the aquifer protection permit needs for NORD's Johnson Camp Mine. This included an evaluation of the geologic and hydrogeologic conditions for the Dagoon area. A geodatabase was created for the site, as part of developing the Site Conceptual Model.

<b>5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT</b> <i>(Present no more than five (5) projects. Complete one Section 5 for each project.)</i>		
<b>EXAMPLE PROJECT #3</b>		
<b>a. TITLE AND LOCATION (City and State)</b> <b>Solana Generating Station near Gila Bend, Arizona</b>	<b>b. YEAR COMPLETED</b>	
	<b>PROFESSIONAL SERVICES (2011 – Present)</b> <b>Air Pollution Control and Water Resources</b>	<b>CONSTRUCTION (If applicable)</b> <b>Not Applicable</b>

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**23. PROJECT OWNER'S INFORMATION**

23. PROJECT OWNER'S INFORMATION		
c. PROJECT OWNER <b>Abengoa Solar One, LLC</b>	d. DOLLAR AMOUNT OF PROJECT <b>\$248,000</b>	e. TOTAL COST OF PROJECT <b>\$248,000</b>

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

JBR assisted Abengoa Solar One, LLC with their plan to build, operate, and maintain a 250 MW concentrating solar power (CSP) electrical generating plant, Solana Generating Station (Solana) near Gila Bend, Arizona. The innovative nature of Abengoa Solar's CSP and thermal energy storage technology required updates to the design of the facility as new information from research and pilot plants was obtained. The new information required changes to the Solana Air Quality Permit. JBR revised process flow diagrams, created a revised emission inventory for the facility, and prepared the non-Title V non-minor permit revision in order to update the permit to reflect the new information and the subsequent changes to the original design of the facility. JBR assisted the client to respond to questions from the Maricopa County Air Quality Department in a timely manner in order to facilitate issuance of the revised permit. JBR also reviewed the aquifer protection permit for the drywells at the site and developed a GIS geodatabase for the site.

**5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT**

*(Present no more than five (5) projects. Complete one Section 5 for each project.)*

**EXAMPLE PROJECT #4**

a. TITLE AND LOCATION <i>(City and State)</i> <b>Bagdad, Morenci, Safford, Sierrita, and Central Analytical Services Lab facilities in Arizona</b>	b. YEAR COMPLETED	
	PROFESSIONAL SERVICES <b>(2011 – Present) Air Pollution Control</b>	CONSTRUCTION <i>(If applicable)</i> <b>Not Applicable</b>

**23. PROJECT OWNER'S INFORMATION**

23. PROJECT OWNER'S INFORMATION		
c. PROJECT OWNER <b>Freeport-McMoRan</b>	d. DOLLAR AMOUNT OF PROJECT <b>\$1,700,000</b>	e. TOTAL COST OF PROJECT <b>\$1,700,000</b>

f. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

JBR has conducted extensive permitting and compliance projects for the Bagdad, Morenci, Safford, Sierrita, and Central Analytical Services Lab facilities. The highlights of these services included:

- Permitting of a second concentrator, the Metcalf Concentrator, for Morenci,
- Permitting upgrades to the existing Morenci Concentrator by adding quaternary crushing systems in order to counteract changes in the hardness of the ore and to restore capacity to historical production rates,
- Preparation and submittal of the Title V renewal application for Morenci,
- Installation of a 10-meter tower at Morenci and a 60-meter meteorological tower instrumented at three levels for Sierrita,
- Annual emission inventories for the Bagdad and Safford facilities and semi-annual compliance certifications for Morenci, and
- Performance testing of emissions from pollution control devices as required by the air quality permits for the Bagdad, Safford, and Chino Mines facilities.

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The above projects have been augmented by multiple minor permit revisions to refine various operations at Morenci, Bagdad, Safford, and the Central Analytical Services Laboratory at Safford. JBR also developed a GIS geodatabase for two of the sites to track location, maintenance, and compliance information for production equipment, wells, and air emission points associated with the environmental permits associated with each site.

5. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT		
(Present no more than five (5) projects. Complete one Section 5 for each project.)		
<b>EXAMPLE PROJECT #5</b>		
a. TITLE AND LOCATION (City and State)	b. YEAR COMPLETED	
<b>Apache Nitrogen, Benson, Arizona</b>	PROFESSIONAL SERVICES <b>(2011 – Present)</b> <b>Air Pollution Control</b>	CONSTRUCTION (If applicable) <b>Not Applicable</b>
23. PROJECT OWNER'S INFORMATION		
c. PROJECT OWNER	d. DOLLAR AMOUNT OF PROJECT	e. TOTAL COST OF PROJECT
<b>Apache Nitrogen</b>	<b>\$350,000</b>	<b>\$350,000</b>

g. BRIEF DESCRIPTION OF PROJECT AND RELEVANCE TO THIS CONTRACT (include scope, size, and length of project)

JBR provided Class I Air Permitting Support for a nitrogen manufacturing facility in Benson, Arizona. JBR's services included preparation of a Class I permit renewal application, which incorporated numerous process changes and permit modifications that had occurred since the last permit had been issued, as well as a review of historic production rates and emission factors previously used to calculate emissions. JBR also prepared a number of minor and significant permit revision applications to add new processes to facility operations as well as revise and correct operational information and new equipment being used. Additional support tasks conducted by JBR include preparation of the annual emissions inventory, TRI, and GHG reports, analysis of CEMS data, and review of the source testing methods historically used to demonstrate permit compliance. JBR also recently began providing source testing services for this client.

**6. ADDITIONAL INFORMATION**

a. PROVIDE ANY ADDITIONAL INFORMATION YOU FEEL MAY BE NECESSARY TO DESCRIBE YOUR FIRMS QUALIFICATIONS. (ATTACH ADDITIONAL SHEETS AS NEEDED.)

## **Company Overview**

JBR is a highly respected, full service environmental consulting firm that was founded in 1985 and has almost 150 employees located in 12 offices throughout the Western US. JBR's professional staff are exceptionally well qualified and experienced in their respective fields, and include; environmental scientists and planners; licensed environmental, civil, and chemical engineers; registered geologists and hydrogeologists; chemists; and biologists. JBR has performed extensive environmental consulting services for a client base including: federal, state, and local government agencies; mining; manufacturing; oil and gas; energy generation and transmission; and telecommunication. JBR's multi-disciplinary services include the following: air and water permitting; NEPA compliance; solid and hazardous waste management; biological and ecological; geology and hydrogeology; due diligence and audits; storm water and surface water permitting; GIS services; site assessment and investigation; assessment and remediation of leaking underground storage tank sites; and air quality.

JBR has assembled a team that has extensive experience with air pollution control; environmental impact studies, assessments, or statements; zoning and landuse studies; Phase I Environmental; soils & geological studies; testing and inspection services; storm water handling & facilities; water resources; hydrology; and groundwater. Our licensed professionals, several of whom formerly worked for regulatory agencies, thoroughly understand environmental regulations and are experts in developing effective strategies for our clients to maintain compliance throughout the initial start-up, operation, and closure activities. JBR consistently evaluates the most cost effective way to navigate each project towards completion based on regulatory requirements and site-specific environmental conditions. JBR's general process for permitting includes determining which regulatory framework applies, an analysis of baseline conditions, an evaluation of the proposed control measures, and development of an operating strategy that will enable the facility to operate in compliance for the life of the project. JBR's general process for conducting corrective action and risk assessment activities includes developing a site conceptual model, evaluating the risk of the contaminants of concern, determining the feasibility of the source removal options and time required for remediation, scoping out the permitting and reporting requirements, and proposing remedial objectives that are appropriate for the current and future use of each site. JBR consistently focuses on optimizing the remedial system operations to ensure that the corrective action activities are conducted in the most cost effective manner. This includes focusing the remedial activities to achieve the highest mass removal rates, transitioning to more cost effective equipment when site conditions allow, and constantly evaluating each site for risk-based closure.

What differentiates JBR from our competitors is that we consistently provide exceptional work quality and superior customer service. All of JBR's upper management are experts in their fields and actively manage projects, and our CEO personally conducts technical training workshops for JBR staff and our clients. Each of our project managers has a solid reputation in the industry and a proven track record of producing defensible work products. Our clients can count on consistently receiving the same exceptional service from any of our team members in any of our offices.

The following organizational chart presents JBR's proposed key personnel and lines of communication for this contract, if awarded. Mr. Martin Minter will be your sole point of contact for any contract results from this proposal, in an effort to avoid multiple contacts and repetitive communications.



**ARIZONA STATE AGENCIES AND  
 COOPERATIVE AGENCIES**



creating solutions for today's environment

**MARTIN MINTER, PG, RG, CRS, CEM**  
 SENIOR GEOLOGIST/ENVIRONMENTAL  
 PROJECT MANAGER

**Air Pollution Control**

**TASK MANAGER**

Mannie Carpenter, PE

**TASK SUPPORT**

Louis Thanukos, PhD  
 Jamie Wilson, PE  
 Amber Summers  
 Kathleen Vance, PE  
 Kathy Houed, EIT  
 Michael Sonenberg, PE  
 Stephanie French  
 Shantanu Kongara

**Environmental  
 Impact Studies,  
 Assessments, or  
 Statements; Zoning  
 and Land Use  
 Studies**

**TASK MANAGER**

Martin Minter, PG, RG,  
 CRS, CEM

**TASK SUPPORT**

Debra Lemke, PWS,  
 CPESC  
 Kathleen Vance, PE  
 Jill Hankins  
 Stephanie French

**Phase I  
 Environmental;  
 Soils & Geologic  
 Studies; Testing  
 and Inspection**

**TASK MANAGER**

Martin Minter, PG, RG,  
 CRS, CEM

**TASK SUPPORT**

Mannie Carpenter, PE  
 Kathleen Vance, PE  
 Michael Sonenberg,  
 PE  
 Jill Hankins  
 Stephanie French

**Storm Water  
 Handling &  
 Facilities; Water  
 Resources;  
 Hydrology;**

**TASK MANAGER**

Kathleen Vance, PE

**TASK SUPPORT**

Mannie Carpenter, PE  
 Martin Minter, PG, RG,  
 CRS, CEM  
 Debra Lemke, PWS,  
 CPESC  
 Michael Sonenberg,  
 PE  
 Jill Hankins  
 Stephanie French

JBR's project team certifications for Arizona that are relevant to this contract are listed below

State of Arizona, Board of Technical Registration Firm Registration (Environmental Engineering, Geology, and Remediation) #16231-0, Expires March 31, 2014
State of Arizona, Board of Technical Registration Arizona Branch Registration (Environmental Engineering, Geology, and Remediation) #16231-1, Expires November 30, 2014
State of Arizona, Professional Engineer (Environmental): Mannie L. Carpenter #40264, Kathleen C. Vance #41036, and Jamie C. Wilson #52545
State of Arizona, Certified Remediation Specialist: Martin J. Minter #35824
State of Arizona, Registered Geologist: Martin J. Minter #31663

## **JBR's Additional Experience on Similar Projects**

The following section summarizes some of JBR's additional experience on similar projects in the western US that is directly relevant to the scope of work of this contract.

### **Utah National Guard, Camp Williams Military Training Reservation, Environmental Due Diligence (Environmental Site Assessment, Phase I Environmental, Zoning; Land Use Study)**

On behalf of the Utah National Guard (UTNG) and its 26,000-acre Camp Williams Military Training Reservation (MTR), JBR personnel completed environmental due diligence in accordance with both ASTM Standard E 1527-05, Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process and ASTM Standard D 6008-96 (Reapproved 2005), Practice for Conducting Environmental Baseline Surveys. In accordance with Department of Defense (DOD) and U.S. Army Corps of Engineers (USACE) policy, JBR conducted the due diligence activities in support of the UTNG's renewal of its lease of the property from the U.S. Department of Army. The military reservation has existed since 1914 and provides training grounds for numerous state and National Department of Defense entities.

The Camp Williams MTR is comprised of numerous parcels of land that are owned by state and federal parties; several of which were to be exchanged and/or sold to public and private entities in subsequent years. JBR's ESA/EBS final report was referenced by the UTNG during the lease renewals, land exchanges, property transactions, and/or real estate developments, including construction projects at Camp Williams. JBR formulated its ESA/EBS final report to help streamline the environmental due diligence process for any such new construction, thereby saving the UTNG considerable time and monies for future construction projects.

The document includes a variety of user-friendly Geographical Information System (GIS) figures and maps, and project-specific geodatabase, such that future changes across Camp Williams may be easily documented by the UTNG.

### **BLM and Nevada Energy, Ely Energy Center in Nevada (Environmental Impact Statement)**

JBR prepared a Draft EIS for the Ely Energy Center, a proposed coal-fired power plant, for the BLM Ely Field Office. For this project, JBR specialists evaluated resources on approximately 45,000 acres of land potentially impacted by a proposed 3,000-acre coal-fired power plant, substations, linear facilities including transmission lines (approximately 230 miles of 500 kV lines), well field and water lines (over 40 miles of pipeline), railroad spurs, and access



roads. JBR also performed all related baseline studies for the EIS, including wildlife, T&E species, wetlands, vegetation, visual, noise, and water resources for the proponent. JBR prepared scoping material; planned and directed public meetings, prepared specialist reports, conducted all GIS analysis, conducted cumulative impact analysis, prepared maps, assisted in alternative development, maintained and submitted the project record to the BLM (digital and hard copies and an index), and prepared and distributed a Draft EIS. Tens of thousands of public comments were handled efficiently with a content analysis process.

### **Dixie National Forest (Utah) Oil and Gas (Environmental Impact Statement, Soils and Geological Studies, and Water Resources)**

JBR has prepared two EISs and three EAs for projects located on the Dixie National Forest. The most complex was the EIS for forest-wide planning to determine which lands with federal oil and gas rights should be made administratively available for oil and gas leasing and under what conditions. Seven alternatives were developed in order to address public concerns regarding the project and the management direction of the Dixie National Forest, and to consider the impacts of opening the Forest to leasing. JBR specialists prepared technical reports for those resources that could be affected by oil and gas leasing, including Visual Resources; Roadless, Unroaded, and Undeveloped Areas; Recreation; Fish and Wildlife; Threatened, Endangered, Proposed, Candidate, Forest Sensitive, and Management Indicator Species; Water and Watershed Resources; Soils and Geologic Hazards; Vegetation; Transportation Systems; Socioeconomics; and Air Resources. JBR's NEPA specialists also prepared a BA and BE to analyze the effect of the selected alternative on Threatened, Endangered, and Candidate species; and on Forest Sensitive Species, respectively. JBR prepared scoping material, planned and directed open houses, prepared technical reports, conducted all GIS analysis, conducted cumulative impact analysis, prepared maps, conducted complex air quality modeling and prepared a Supplemental Information Report (SIR) addressing air quality and climate change, assisted in alternative development, maintained and submitted the project record to the Dixie National Forest (digital and hard copies and an index), prepared and distributed a Draft EIS, performed content analysis on over 10,000 pieces of correspondence (279 original) received during the public comment period, and prepared and distributed a Final EIS that incorporated comments received as well as all new information and direction received since the Draft.



### **Utah Oil Shale Project, Pre-permitting Environmental Assistance (Air Pollution Control, Environmental Impact Study, Phase I Environmental, Geologic Studies, Water Resources)**

JBR was contracted by Oil Shale Exploration Company (OSEC) to perform pre-permitting environmental work in support of OSEC's Utah Oil Shale Project. The project was located in the Uinta Basin of eastern Utah and was conceptually planned for both mining and processing facilities. JBR assisted OSEC with multiple tasks including project management, Phase I ESA, air quality assessment and monitoring, mining-related pre-permitting, spent shale issues, utility corridor connection issues, preliminary NEPA

issues, and preliminary socioeconomic issues.

To provide air quality assessment and monitoring, JBR developed initial agency contacts and used agency guidance to design, select a site location, and construct an air quality and meteorological monitoring station. A quality assurance plan was prepared for operation of the station, and recommendations were made for future air quality-related monitoring and modeling.

JBR provided pre-permitting assistance to OSEC regarding mining by summarizing data needs and best environmental practices for development for the path forward toward mining permits. JBR provided preliminary

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information on available spent shale geotechnical, geochemical characteristics, hydrologic/hydrogeologic modeling, and conceptual approaches to spent shale placement alternatives. A preliminary Waters of the U.S. evaluation was performed and permitting and potential EIS analysis needs were outlined. Conceptual power and pipeline corridor alignments were analyzed with regard to evaluation criteria for further optimization of the alignments and support facilities. Data were assembled and mapped to assist in the future optimization of the alignment, and recommendations were made for future work.

The potential NEPA triggers (that may have led to an EIS) during future implementation of the project were analyzed with regard to federal lands and federal permitting nexus. The potential for an EIS was outlined for OSEC. JBR also prepared preliminary recommendations for socioeconomic impacts mitigation planning efforts for the project, including draft content and concept details.

**South Sacramento Habitat Conservation Plan EIR/EIS Endangered Species Evaluation, Sacramento, California (Environmental Impact Study and Water Resources)**

The scope of work consisted of preparation of a combined Environmental Impact Report/Environmental Impact Study (EIR/EIS) for Sacramento County, the California Environmental Quality Act (CEQA) lead agency and the U.S. Fish and Wildlife Service, the lead NEPA Agency. The Proposed Action was the implementation of the South Sacramento Habitat Conservation Plan (SSHCP) and issuance of incidental take permits for the take of 43,000 acres of endangered species habitat that included impact to over 800 acres of wetlands. The SSHCP is a regional plan for planned growth that protects 40 species sensitive species, including 11 listed under the Endangered Species Act, and is intended to improve existing mitigation for wetland impacts. The Life Science/JBR team was responsible for evaluating effects of the project, primarily on agriculture, biological resources and wetlands, and ensuring the document meets the regulatory, CEQA, and NEPA compliance needs of the USACE and the Department of Fish and Game. The analysis in the document would be used to obtain a Clean Water Act Section 404 programmatic general permit and Section 401 water quality certification from the USACE and the Regional Water Quality Control Board to pre-approve up to 700 acres of fill in wetlands for the development and build-out of south Sacramento County. The preparation of the EIR/EIS was put on hold until additional funding for the project could be obtained.



**Solar Reserve Tonopah Solar Energy Crescent Dunes Project, Nye County, Nevada (Environmental Impact Assessment)**

Solar Reserve is currently permitting the Crescent Dunes Project, a 180 megawatt concentrated solar facility, 13 miles northwest of Tonopah, in Nye County, Nevada on public land administered by the BLM. JBR has performed T&E surveys on approximately 7,000 acres. Surveys included live trapping for small mammals. The surveys found numerous BLM sensitive plant and animals including loggerhead shrike, prairie falcon, golden eagle, Swainson's hawk, pale kangaroo mouse, and Nevada oryctes. JBR is currently preparing an Avian Protection Plan and Mitigation Plan to protect sensitive species impacted by the project.

**Nevada Division of Transportation (NDOT), BMP Effectiveness for I-580 Extension Project (Storm Water Handling & Facilities and Testing & Inspection Services)**

JBR has an ongoing project conducting water quality monitoring and studying BMP effectiveness for NDOT's I-580 Extension project. NDOT has incorporated State-of-the-Art engineering into the highway design in an effort to maintain and improve water quality, such as water quality basins and sand-oil interceptors. To determine any impacts to waters resulting from implementation of the project, JBR is performing water quality monitoring

(baseline, interim, and post construction sampling). This water quality study includes a Baseline Water Quality Assessment; Sampling and Analysis Plans; quarterly surface water monitoring; storm water sampling; remote access to two weather stations; design, installation, and monitoring of in-stream near-continuous turbidity probes and data loggers; interpretation of water quality analyses related to construction activities; assessing temporary BMP function during runoff events; and report writing.

**Fisher Sand and Gravel NDOT I-580 Extension Storm Water Permit Compliance Monitoring and SWPPP Development, Washoe County, Nevada (Storm Water Handling)**

Fisher is the contractor constructing NDOT's I-580 Extension. JBR is assisting Fisher by preparing and maintaining the project SWPPP and providing BMP design and monthly and on-call monitoring of the site for stormwater permit compliance. JBR also performed BMP and storm water regulations training to Fisher personnel. JBR prepares the permit applications for the Temporary Working in Waterways Permit, developed the Surface Water Containment Plan for their asphalt batch plant, and prepared the Noxious Weed Management Plan and monitors the entire construction corridor for noxious weeds biannually. JBR also is assisting in preparation of the Vegetation Restoration Plan for Galena Creek Bridge.



**Squaw Village Neighborhood Company Water Quality Monitoring and BMP Effectiveness Study, Olympic Village, California (Water Resources and Testing & Inspection Services)**

JBR negotiated with the California Water Board regarding Waste Discharge Permit requirements and how Squaw Village Neighborhood Company (SVNC) could satisfy those obligations. SVNC has two major requirements in their discharge permit, discharge monitoring to Squaw Creek and a storm water treatment effectiveness study, both of which JBR implements for SVNC. JBR designed the monitoring plan for the site to fulfill required elements of the Permit, and to develop a plan that will

assess the effectiveness of the vertical media filter stormwater treatment system installed in the parking lot at Squaw Village, which discharges to Squaw Creek. JBR developed the Sampling and Analysis Plan for this study that defined the monitoring methods, procedures and protocols for all sampling and equipment. JBR designed and oversaw installation of automated sampling equipment with digital remote access, and maintains and programs the automated equipment for runoff monitoring to study the effectiveness of the treatment facility. JBR performs the surface water and stormwater sampling, data interpretation, and reporting to the Water Board. JBR trained SVNC staff to perform surface water grab sampling in Squaw Creek.

**Northstar Mountain Properties Highlands Project Water Quality Monitoring, Truckee, California (Water Resources and Testing and Inspection Services)**

JBR designed and is implementing the water quality monitoring program for long-term development of the Northstar area within the Martis Creek Basin. JBR coordinated with the California State Water Board regarding 401 Water Quality Permit requirements and how to partially satisfy obligations of the Martis Valley Community Plan. JBR designed the monitoring network to fulfill required elements of the Permit, and to develop a plan that will assess potential impacts from long-term development on water quality in Martis Creek Basin, understanding what monitoring was already being conducted in the basin. JBR developed a QAPP that defined the monitoring methods, procedures and protocols for all sampling and equipment. JBR designed the equipment setup and deployed near-continuous water monitoring equipment at several sampling sites. JBR performs surface water, macroinvertebrate, and sediment toxicity sampling; automated equipment maintenance and calibration; large database management; and reporting in compliance with Water Board permitting. JBR also has facilitated meetings to attempt to coordinate monitoring efforts in the basin by multiple stakeholders (other developers with

similar permit requirements). Additionally, JBR is researching historic water quality data in the basin to compile into one database, and preparing a Historic Water Quality Assessment of the basin, for use by the Water Board and for use in developing the County's Monitoring Plan.

**[City of Sparks Rock Whitewater Park Monitoring Plan and Implementation, Sparks, Nevada \(Water Resources; Hydrology, and Testing & Inspection Services\)](#)**

The City of Sparks has retained JBR for a five year intensive monitoring program for the newly constructed Rock Park Whitewater Park. In order to comply with conditions imposed by the regulatory agencies, JBR is evaluating:

- fish passage,
- sediment transport,
- in-channel feature stability,
- flood flow performance,
- riparian vegetation,
- water quality,
- Sediment transport
- aquatic habitat, and
- benthic macroinvertebrates.



In order to best manage the data and analysis of the five-year program our team will utilize Microsoft® (MS) Access and Excel, ArcGIS, HEC-RAS, and Riverware's Flow 2D modeling software. Project highlights include radio frequency identification (RFID) tagging and tracking of over 200 resident Truckee River fish per year, calibration of hydraulic model parameters with measured flow velocities, roughness coefficients, photometric substrate monitoring techniques, and velocity measurements to develop rated sections for each park feature (drop structure). Reporting will include coordination and report approval requirements from USFWS, Nevada Division of Wildlife, USACE, Nevada Division of Environmental Protection (NDPE), and the Nevada State Engineers. JBR will provide annual reports and presentations to the City of Sparks and agencies in partnership with Summit Engineering who is providing survey and hydraulic engineering assistance.

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7. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS

a.	Percentage of Total Work Attributable to State, Federal and Municipal Government Work:	6%
b.	Percentage of Total Work Attributable to Non-Government Work:	94%

8. AUTHORIZED REPRESENTATIVE. The foregoing is a statement of facts.

Signature: Louis C. Thanukos Date: Dec. 12, 2013

Name: Louis C. Thanukos, PhD Title: Division Manager, Tempe Office

## EXCEPTIONS

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Uniform Instructions to Offerors, C.3 Exceptions to Uniform  
Terms and Conditions

Section 4.7 Exceptions to Terms, exceptions to terms and conditions as stated in the Uniform Instructions to Offerors, Paragraph 3.4, JBR Environmental Consultants, Inc. requests the following exception (*see last sentence in italics*) to the Uniform Terms and Conditions, Section 4. Costs and Payment, Paragraph 4.1. Payments (page 16 of 25):

#### 4. COSTS AND PAYMENTS

4.1. Payments. Payments shall comply with the requirements of A.R.S. Titles 35 and 41, Net 30 days. Upon receipt and acceptance of goods or services, the Contractor shall submit a complete and accurate invoice for payment from the State within thirty (30) days. *Contractor reserves the right to stop work or withhold product or data prepared under this Contract if the State has not paid undisputed invoices submitted by Contractor.*