

LABORATORY  
EVALUATION CHECKSHEET

LABORATORY: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_  
DATE: \_\_\_\_\_

LABORATORY PERSONNEL CONTACTED

NAME	TITLE
_____	_____
_____	_____
_____	_____
_____	_____

EVALUATION PERSONNEL

NAME	TITLE
_____	_____
_____	_____
_____	_____

Enclosure 3

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1. ORGANIZATION OF PERSONNEL

Some personnel may occupy more than one position, particularly in small laboratories. The recommended minimum standards for the laboratory director/manager are a bachelor of science degree and 5 years experience. The recommended minimum standards for the chief analyst directing the testing operations are a bachelors degee in chemistry and 2-3 years experience in analyses being performed.

a. Laboratory Director/Manager

Name: \_\_\_\_\_  
Education: \_\_\_\_\_  
Experience: \_\_\_\_\_

b. Project Manager

Name: \_\_\_\_\_  
Education: \_\_\_\_\_  
Experience: \_\_\_\_\_

c. Quality Assurance Officer

Name: \_\_\_\_\_  
Education: \_\_\_\_\_  
Experience: \_\_\_\_\_

d. Chief Classical Inorganic Analyst

Name: \_\_\_\_\_  
Education: \_\_\_\_\_  
Experience: \_\_\_\_\_

e. Chief Metals Analyst

Name: \_\_\_\_\_  
Education: \_\_\_\_\_  
Experience: \_\_\_\_\_

f. Chief Organic Analyst

Name: \_\_\_\_\_  
Education: \_\_\_\_\_  
Experience: \_\_\_\_\_

2. ANALYSTS

Most analysts should have a minimum bachelor of science degree in chemistry or closely related laboratory science and at least one year's experience performing the analyses required in the contract. Personnel interpreting spectra from gas chromatographs or gas chromatograph/mass spectrometers should have a minimum of two and three year's experience, respectively. Some laboratories make extensive use of technicians. Their work should be performed under the direction of a chemist or senior analyst.

a. Name: \_\_\_\_\_  
Education: \_\_\_\_\_  
Experience: \_\_\_\_\_  
Analyses Performed: \_\_\_\_\_

b. Name: \_\_\_\_\_  
Education: \_\_\_\_\_  
Experience: \_\_\_\_\_  
Analyses Performed: \_\_\_\_\_

c. Name: \_\_\_\_\_  
Education: \_\_\_\_\_  
Experience: \_\_\_\_\_  
Analyses Performed: \_\_\_\_\_

d. Name: \_\_\_\_\_  
Education: \_\_\_\_\_  
Experience: \_\_\_\_\_  
Analyses Performed: \_\_\_\_\_

e. Name: \_\_\_\_\_  
Education: \_\_\_\_\_  
Experience: \_\_\_\_\_  
Analyses Performed: \_\_\_\_\_

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3. SUMMARY OF PERSONNEL

a. Do the personnel assigned to this project have appropriate educational background and experience to successfully fulfill this contract? Explain. \_\_\_\_\_  
\_\_\_\_\_

b. Is the laboratory adequately staffed to meet time requirements of of the contract? \_\_\_\_\_

c. Were pertinent personnel available for interview during the inspection? \_\_\_\_\_

d. Are training programs in effect to keep analysts current in instrumentation, procedures and quality control? \_\_\_\_\_

e. Are personnel adequately trained in safety procedures? \_\_\_\_\_

f. Other comments regarding personnel \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

4. SAMPLING

- a. Does the contract specify sampling by the laboratory? \_\_\_\_\_
- b. What sampling methods are being used? Do they follow contract specifications? \_\_\_\_\_  
\_\_\_\_\_
- c. What type of sample containers are being used? \_\_\_\_\_  
\_\_\_\_\_
- d. State method used for cleaning containers. \_\_\_\_\_  
\_\_\_\_\_
- e. State preservation methods being used. \_\_\_\_\_  
\_\_\_\_\_
- f. How are samples identified in the field? \_\_\_\_\_  
\_\_\_\_\_
- g. State method used for recording field sampling and analysis. \_\_\_\_\_  
\_\_\_\_\_
- h. What analyses are being performed in the field? \_\_\_\_\_  
\_\_\_\_\_
- i. Are field calibrations required? Explain. \_\_\_\_\_  
\_\_\_\_\_
- j. How are samples transported to the laboratory? Are holding times being met? \_\_\_\_\_  
\_\_\_\_\_
- k. Are blind duplicate and spike samples prepared in the field for laboratory analysis? Are field blanks used? \_\_\_\_\_  
\_\_\_\_\_
- l. Are chain-of-custody procedures being followed if this is required in the contract? \_\_\_\_\_
- m. Other comments regarding sampling \_\_\_\_\_  
\_\_\_\_\_

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5. SAMPLE RECEIPT AT THE LABORATORY

If any analyses are to be subcontracted to another laboratory a separate site inspection is required to evaluate the subcontractor's capabilities.

- a. Is a person designated to receive samples into the laboratory?

Name: \_\_\_\_\_

- b. Are written procedures developed for receipt and storage of samples? Are they available at the sample receipt area? \_\_\_\_\_

- c. Is a chain of custody form signed by persons logging in samples if appropriate? \_\_\_\_\_

- d. Is a permanent logbook maintained? Are records kept in ink? \_\_\_\_\_

- e. Are chain-of-custody seals checked for integrity? \_\_\_\_\_

- f. Does the information on the samples match that in the field notebooks or the sample transmittal sheets? \_\_\_\_\_

- g. Are discrepancies noted in the logbook? \_\_\_\_\_

- h. Are adequate facilities available for sample storage, including refrigerator and freezer space? \_\_\_\_\_

- i. Is a system in effect to assure that the proper cold storage temperature is maintained? \_\_\_\_\_

- j. Other comments regarding sample receipt \_\_\_\_\_

6. LABORATORY FACILITIES

a. Is the laboratory maintained in a clean and efficient manner?  
\_\_\_\_\_

b. Does the laboratory appear to have adequate work space? \_\_\_\_\_  
\_\_\_\_\_

c. Does the laboratory have sufficient fume hoods? Are they checked periodically for air flow? \_\_\_\_\_  
\_\_\_\_\_

d. Does the laboratory have safety devices such as eye washes, showers, spill control kits, etc? \_\_\_\_\_  
\_\_\_\_\_

e. Are laboratory operations adequately separated to avoid cross-contamination? \_\_\_\_\_  
\_\_\_\_\_

f. Are chemical waste disposal procedures well-defined and followed by the laboratory? \_\_\_\_\_  
\_\_\_\_\_

g. Is an adequate supply of distilled or deionized water available? Is it checked for purity? \_\_\_\_\_  
\_\_\_\_\_

h. Is adequate chemical storage available, including solvent cabinets? Are chemicals properly segregated? \_\_\_\_\_  
\_\_\_\_\_

i. Are chemicals dated upon receipt? \_\_\_\_\_

j. Are chemicals in use that have passed identified expiration dates? \_\_\_\_\_

k. Is sufficient glassware available to handle samples specified in the contract? \_\_\_\_\_

l. Is volumetric glassware of class "A" quality? \_\_\_\_\_

m. Are instructions for glassware cleaning posted near the wash area? \_\_\_\_\_

n. Is provision made for standards storage? Inorganics \_\_\_\_\_  
Organics, refrigerated \_\_\_\_\_

o. Other comments regarding facilities \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



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e. Are instruments adequate for the analyses to be performed?  
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f. Have any of the instruments been modified in any way? How?  
\_\_\_\_\_

g. Are manufacturers operating manuals readily available for each instrument? \_\_\_\_\_

h. Are calibration protocols available to the operator? \_\_\_\_\_

i. Are calibration results maintained in a permanent record? \_\_\_\_\_

j. Are instruments under service contract? Which ones? \_\_\_\_\_

k. Are permanent service records available? \_\_\_\_\_

l. Are instruments properly vented? \_\_\_\_\_

m. Additional comments on instruments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



b. Do the methods conform to those specified in the contract?  
\_\_\_\_\_

c. Are there any deviations to the reference methodology?  
Explain. \_\_\_\_\_

d. Are the written procedures readily available to the analysts?  
\_\_\_\_\_

e. Do the methods provide the needed detection limits? \_\_\_\_\_

f. Does the laboratory require strict adherence to specific  
quality control procedures for each method? \_\_\_\_\_

g. Are reagent grade or higher purity chemicals used? \_\_\_\_\_

h. Are fresh analytical standards prepared in keeping with good  
quality control practices? \_\_\_\_\_

i. Are the primary standards traceable to NBS or EPA standards?  
\_\_\_\_\_

j. Are records of standards preparations maintained in a logbook?  
\_\_\_\_\_

k. Do the analysts maintain complete records of analyses with  
comments and enter data in a neat and accurate manner? \_\_\_\_\_

l. Additional comments on analyses \_\_\_\_\_

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9. QUALITY ASSURANCE/QUALITY CONTROL

a. Does the laboratory maintain a quality assurance/quality control manual? \_\_\_\_\_

b. Does the manual address the following items?

- (1) Organization and Personnel
- (2) Quality assurance objectives
- (3) Sampling procedures
- (4) Facilities and equipment
- (5) Instrumentation and maintenance
- (6) Calibration procedures and frequency
- (7) Analytical procedures
- (8) Data analysis, validation and reporting
- (9) Internal quality control checks
- (10) External quality control checks
- (11) Corrective action
- (12) Record keeping

c. Is this manual readily available to all laboratory personnel?  
\_\_\_\_\_

d. Are duplicate and spike analyses performed on a minimum number of samples (i.e. 10%)? \_\_\_\_\_

e. Are acceptable criteria developed for duplicate and spike analyses? \_\_\_\_\_

f. Are quality control charts used? \_\_\_\_\_  
\_\_\_\_\_

g. Are reagent blank analyses run with each set of samples? \_\_\_\_\_

h. Are a minimum of three and preferably more standards run to produce standard curves? \_\_\_\_\_

i. Do routine procedures require that sample concentrations fall within the limits of the standard curves? \_\_\_\_\_

j. Do supervisory personnel audit laboratory procedures on a routine basis? \_\_\_\_\_

k. Does the laboratory routinely run standard reference materials to evaluate analytical performance? Are these results documented?  
\_\_\_\_\_

l. Are data calculations checked by a second person? \_\_\_\_\_

m. Are recoveries of organic surrogates documented? \_\_\_\_\_

n. Are tuning records maintained for gas chromatograph/mass spectrometers? \_\_\_\_\_

o. Are raw data and records maintained for the required period of time? \_\_\_\_\_

p. Are quality control data routinely reported? \_\_\_\_\_

q. Are external standard quality control samples run at least twice each year? \_\_\_\_\_

r. Additional comments on quality assurance/quality control: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

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10. REPORTING

a. Is a standard reporting format required? \_\_\_\_\_

b. Is provision made for the submission of raw data and chromatograms if required? \_\_\_\_\_

c. Is there a specified time frame for reporting data? \_\_\_\_\_  
\_\_\_\_\_

d. Additional comments on reporting \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_