ABTSWH SEM
Working Group Infc

SEM Quality Control Plan (Paragon SEM-PLAN-01, Rev 3, dated 9-30-21)

Page 3 - Section 6.0 Control of Defective Services

Section 6.0 identifies Paragon's identification of "defective service." The Board assumes that "defective service" identifies problems (accuracy, completeness, deficiencies, etc.) with the SEM including corrective actions.

"SEM Project Manager will notify COR of any defective services as well as report the results of the evaluation and corrective actions taken to address defective services. A corrective action report will be generated for any significant corrective action, as determined by the SEM Project Manager."

The Board would like a copy of all such corrective action reports, or, if voluminous, a random representative sample covering 2014 through the present as well as a summary of the total number of such reports, their dates of filing and the facility which they reference.

DOL Response: Pending review by the Office of Senior Procurement Executive (OSPE).

Page 4 - Appendix 4, Quality Control Subject Areas, Section 2.0
2.2 Annual report with suggestions to improve SEM database

The Board would like copies of these annual reports since 2014.

DOL Response: Below are the Annual Reports for this contract period.

PARAGON SEM ANNUAL REPORTS.zip

Page 7, Appendix C, SEM Performance Objectives and Requirements, Criteria and Deliverables Deliverable 1.1.3.1- "The DOE-SEM website shall be available over 92% ... "

The Board would like clarification of DOE versus DOL SEM.

DOL Response: PTS provides maintenance and regular updates of the SEM, which is a comprehensive relational database containing information regarding toxic substances at all major Department of Energy (DOE) facilities and uranium sites covered under the Energy Employees Occupational Illness Compensation Program Act (EEOICPA). As shown on Page 7, there are three iterations of the SEM website. The DOL-SEM website is a password protected version of the SEM for use by DOL staff; the IAS website is the public version of SEM; and the DOE-SEM website is used by DOE to compare the DOL and IAS versions once every six months during what is called a “Freeze” while DOE conducts a security review of the information contained in

the DOE-SEM. The DOE-SEM only exists for each freeze and is an exact duplicate of DOL-SEM on freeze day.

Page 8-Appendix C, SEM Performance Objectives. Criteria 2.2.1.1
Provide annual report with suggested changes to improve SEM, including recommended research

The Board is requesting copies of all such annual reports since 2014.

DOL Response: Annual Reports can be found in an earlier answer.

Page 14 -Appendix C - Section 8.0 Contract Management, Section 8.8, Issues Management
"Contract problems or issues will be evaluated to determine the cause and identify appropriate corrective actions"

The Board is requesting copies of the Issues Management Report and information on the frequency of filing for such reports, i.e., monthly, annually, etc.

DOL Response: Pending review by OSPE.

PARAGON SOP-SEM-02, REV 7, Compiling and Entering Toxic Substances into the Site Exposure Matrices {SEM} Standard Operating Procedures

Page 2, Section 4.2, Compiling Toxic Substance Information

"The SEM Chemical Profile Manager selects the information and sources that will be most useful to the users and completes a profile." The remainder of this section describes the mechanics of that process, rather than the triggering information or action.

The Board is requesting information about what activities, information, reporting, etc. result in the decision by the SEM Chemical Profile Manager to select inclusion in the profile.

DOL Response: There is no "triggering information or action." The primary source of new toxic substances for SEM is from the researchers. As researchers review documents obtained from DOE sites, they identify toxic substances and check SEM to determine if the identified substance is in the SEM database. If the substance is in SEM, they enter that substance as a potential exposure with the appropriate associations to work processes, labor categories, buildings, etc. If the identified substance is not in SEM or if they cannot make the determination, the researchers submit those substances to the SEM Chemical Profile Manager for disposition of those substances using a Toxic Material Disposition Sheet (SOP-SEM-03, Appendix A).

The Chemical Profile Manager researches the substances for information found in reputable technical sources and documents the results on a Chemical Profile Input Data Form (Appendix A of SOP-SEM-02). As described in Section 3.0 of SOP-SEM-02, the Chemical Profile Manager will populate SEM with the information elements such as primary name of the substance and

appropriate aliases, Chemical Abstract Numbers, chemical category and descriptions of physical and chemical properties, and other additional descriptive information. These descriptions are not intended to be an exhaustive description of the substance, only information to assist the Claims Examiner with their evaluation of health effects or inform referrals to industrial hygiene specialists. The SEM Chemical Profile Manager uses professional experience and expertise to include information in the chemical profiles in SEM to provide users of DOL-SEM the information they need to assist in in claim processing. An effort is made to include all the information listed in Section 3 for significant substances, e.g., benzene, trichloroethylene, asbestos, etc. However, at times, toxic substances are added to the SEM database without completing a complete profile because a complete profile is not available given reputable technical sources. This frequently occurs with trade name substances and mixture profiles.

When substances are identified by SEM researchers that are not currently in SEM, data is entered in SEM using the Chemical Profile Input Data Form. Sections 4.2 B and D through F specify sources that may be used to obtain information outlined in Section 3.0. Section F provides a listing of several additional sources that may be used and includes "other recognized technical sources". Section 4.2 C must be used to see if Haz-Map includes the substance and whether health effects are shown. If indicated health effects correspond to the active disease list in the SEM database, they are entered for the substance. Other DOL policy driven health effects would also be entered for that substance.

Page 6 - Section 4.3 Toxic Substance/Health Effect (Occupational Disease) Information in the DOL-SEM Database

"DOL-NO (national office) may communicate health effects information that is supplemental or otherwise different from Haz-Map information to the SEM Project Manager using ... " "The DOL-directed exceptions to Haz-Map are tracked and provided to DOL-NO when requested."

The Board requests a copy of the Haz-Map exceptions that have been directed by DOL-NO, along with the information about how that information is tracked, updated and whether any cross reference is made in the SEM that specific Haz-Map information has been deleted or not utilized.

DOL Response: The information that the ABTSWH is requesting here is included in the SEM display. Information included in the "Identification" section of the SEM Health Effects Display includes aliases, explanatory notes, and the health effects lists where the disease link is identified. Whether the health effects came from HAZ-MAP or a DOL exception is noted here. In addition, the profile for any substance with a disease link in SEM includes a SEM display section providing the specific health effects associated with that substance. In this section of the SEM display, all substances that do not come from HAZ-MAP but from an exception directed by DOL include an explanatory note identifying the source. Some examples of health effects and associated chemicals as displayed in SEM include:

The Health Effects Display in SEM for Breast Cancer appears as:

DENTIFICATION	Aliases: Female breast cancer; Male breast cancer. Explanatory Note: This disease entry originated from IARC Group 2a substances and was included after being recommended by the Federal Advisory Board on Toxic Substances and Workers' Health. Health effects list: DOL condition codes.

A toxic substance linked to this disease includes Aldrin CAS: 309-00-2 which includes the display:

SPECIFIC HEALTH EFFECTS (based on Haz-Map Disease List)	**Breast cancer** Aliases: Female breast cancer; Male breast cancer Explanatory Note: This disease entry originated from IARC Group 2a substances and was included after being recommended by the Federal Advisory Board on Toxic Substances and Workers' Health. **Organochlorine insecticides, acute poisoning**

As indicated here, breast cancer is associated to this substance as an exception to HAZ-MAP which does not include this disease link.

The Health Effects Display in SEM for Prostate cancer appears as:

IDENTIFICATION	Aliases: Cancer of the prostate. Health effects list: DOL condition codes.

A toxic substance linked to this disease includes Malathion CAS: 121-75-5 which includes the SEM display:

SPECIFIC HEALTH EFFECTS (based on Haz-Map Disease List)	**Contact dermatitis, allergic** Aliases: Allergic contact dermatitis (ACD); Type IV delayed hypersensitivity; Cell-mediated hypersensitivity **Lymphoma, Non-Hodgkin** Aliases: Non-Hodgkin lymphoma Explanatory Note: This disease entry originated from IARC Group 2a substances and was included after being recommended by the Federal Advisory Board on Toxic Substances and Workers' Health. **Organophosphates & carbamates, acute poisoning** **Prostate cancer** Aliases: Cancer of the prostate Explanatory Note: This disease entry originated from IARC Group 2a substances and was included after being recommended by the Federal Advisory Board on Toxic Substances and Workers' Health.

As indicated here, non-Hodgkin lymphoma and Prostate cancer are associated to this substance as an exception to HAZ-MAP which does not include this disease link.

The ABTSWH also asked about cross references between SEM and HAZ-MAP. The relationship between toxic substances and diagnosed illnesses shown in SEM are primarily derived from the HAZ-MAP database. However, DOL continually updates these relationships in

SEM as new disease associations are published in HAZ-MAP, established by organizations such as the International Association for Research on Cancer or the National Toxicology Program or other scientific sources when identified and accepted by DOL. SEM includes 132 toxic substances with 152 disease links not in the Haz-Map database. The causal links shown in SEM do not represent an exclusive list of the pathways necessary for an affirmative Part E causation determination. The coordination of disease links in SEM and HAZ-MAP is an ongoing effort and is accomplished through several processes.

HAZ-MAP is updated by Dr. Jay Brown to reflect changes and evolution of the scientific information linking toxic exposures to occupational illnesses. Dr. Brown coordinates with PTS staff when such changes occur. These HAZ-MAP updates have resulted in SEM changes consisting of:

- disease changes for 43 substances and 1 work process between May 1, 2020 and April 30, 2021
- disease changes for 16 substances May 1, 2021 and April 30, 2022
- changes for 5 substances including additions of aliases, additions of disease associations, removals of disease associations, or other associated changes that impact SEM.

The specifics of these changes to SEM are reported in the SEM monthly reports submitted to DOL. A sample of those monthly reports during this time period include:

1. July 2020: There was one change made to SEM to align with HAZ-MAP. Ethylene carbonate was added with a link to encephalopathy, chronic solvent.

2. November 2020: There were four changes to SEM in November to coincide with HAZ-MAP activities:
   - Bromoxynil octanoate – Added Contact dermatitis, allergic
   - Halowax 1031 – Deleted Chloroacne
   - Chlorodibromomethane – Added Solvents, Acute toxic effect, Deleted – Encephalopathy, Acute toxic
   - One change in SEM due to a difference found using the SEM vs HAZ-MAP filter on the "Chemicals" admin page -- "Contact dermatitis, allergic" was added as a health effect for Indium-tin oxide

3. February 2021: There was one change in SEM during February due to a change in HAZ-MAP: Contact dermatitis, allergic was added as a health effect for Benzethonium chloride (CAS # 121-54-0).

4. May 2021: There were two changes to HAZ-MAP in May that resulted in changes to SEM. The disease "Contact dermatitis, allergic" was added for Methyl p-methylbenzenesulfonate (CAS# 80-48-8) and for Tartrazine (CAS# 1934-21-0).

5. July 2021: There were five changes to HAZ-MAP in July that resulted in changes to SEM. These changes were:

- 4-Chlorobenzotrifluoride (CAS # 98-56-6) - added "Encephalopathy, chronic solvent"
- Pendimethalin (CAS # 40487-42-1) – added "Contact dermatitis, allergic"
- Molinate (CAS # 2212-67-1) - added "Contact dermatitis, allergic"
- Sodium N-1-naphthylphthalamate (CAS # 132-67-2) - deleted "Contact dermatitis, allergic"
- Hexamethylenetetramine (CAS # 100-97-0) - deleted "Asthma, occupational" (inactive)

In addition, the HAZ-MAP name was changed for "Mica, respirable dusts" to "Mica" so the old Haz-Map name was removed from SEM.

6. December 2021: No disease changes were made for toxic substances in December because of HAZ-MAP updates but one DDLWP name change was made in HAZ-MAP, and this change was subsequently made in SEM. The DDLWP, "Apply coal tar pitch to cables, pipes, and roofs", was changed to "Apply coal tar pitch to cables, pipes, roofs, or while paving".

7. November 2022: The disease "Contact dermatitis, allergic" was added for Methylmercuric chloride due to the instruction in HAZ-MAP for this substance to "See Mercury, alkyl compounds and linked diseases".

8. December 2022: The disease "Contact dermatitis, allergic" was added to p-Bromofluorobenzene (460-00-4), and "Solvents, acute toxic effect" was added to 2,2,3,3,3-Pentafluoro-1-propanol (422-05-9) due to HAZ-MAP review and updates.

9. January 2023: Contact dermatitis, allergic was added as a disease for Methyltrimethoxysilane (1185-55-3) as a result of HAZ-MAP updates.

10. August 2023: Based on a HAZ-MAP update, "Contact dermatitis, allergic" was added for Divinylbenzene, polymer with styrene and ethylstyrene, chloromethylated, trimethylamine-quaternized **(**69011-19-4).

In addition, a SEM versus HAZ-MAP filter was developed with PTS gaining access to the HAZ-MAP database to run comparisons at its discretion, reducing the need for manual comparisons. The filter demonstrated good coordination between the two databases, but some potential discrepancies were identified when the SEM versus HAZ-MAP database comparison filter was applied. A manual review of substances with links to HAZ-MAP was completed in July 2021 to compare health effects shown in the two databases. Of 10,472 substances reviewed, 3,429 showed disease links in HAZ-MAP. Of this total, there were 109 valid discrepancies, of which 97 were due to the way alloys are treated in SEM as opposed to HAZ-MAP. That is, specific alloys in SEM are linked to alloys in HAZ-MAP where no diseases are shown; in SEM, diseases are listed for constituents of alloys. The 97 alloy discrepancies were due to the removal of "inhalation fever" from copper and magnesium in HAZ-MAP, which resulted in the removal of this disease for those alloys containing these substances. It should be

noted that the disease "metal fume fever" remains associated with copper and magnesium and affected alloys. Only 12 other discrepancies required correction (0.1% of total; 0.3% of substances showing diseases).

Page 13 - Appendix A - Chemical Profile Input Data Form
This form identifies the profile of a single chemical, but does not allow for identification of mixed chemicals, i.e. tank farm waste.

The Board requests information relating to any efforts to profile and track mixed chemicals.

DOL Response: The Chemical Profile Input Data Form is used for any primary substance for which a profile is completed. As stated above, profiles are not completed for trade name substances or mixtures unless the substance is in HAZ-MAP or as specified by DOL policy driven health effects. The same form would be used for these substances if a profile was completed.

Information for trade name substances and mixtures is not readily available except for the potential use of material safety data sheets (MSDS) or safety data sheets (SDS). If such documents can be found, the only information used is the substance name, aliases, and a listing of the constituents by CAS number if such information is provided. There are often proprietary constituents where such information is not available. For those constituents for which a CAS number has been provided, SEM is checked to see if that substance is already in SEM. If it is not, it is added as a primary substance by normal procedures. When all chemical constituents have been entered in the DOL-SEM database, the primary trade name or mixture, any associated aliases, and CAS numbers for each of the chemical constituents are added to the database. In cases where a CAS number is not provided or found, an entry of "CAS Not Found" may be used.

Paragon SOP-SEM-03, Rev. 16, dated 11-23-22, Compiling, Entering and Managing DOE Site Information in the DOL-SEM Database

Page 4 - Section 4.3 Document Selection -
This section details the mechanics of selecting documents, e-mails, etc. but does not address the decision-making process used to identify that process.

The Board asks if the decision-making process is specified in some other procedure or site planning document?

DOL Response: The SEM database contains descriptions of specific work processes, buildings (name, number, and/or title, including informal aliases) where they are performed, labor categories involved in the processes (including formal, informal, or site-specific titles and aliases), specific toxic substances involved in the processes, and incidents involving hazardous materials. In developing SEM, DOL held round table meetings with workers from DOE facilities all over the country and gathered their input on the potential hazards at these sites. DOL also obtained copies of thousands of documents from DOE regarding toxic substances at those facilities. When a major update and revision of a specific DOE site is undertaken, the approach

for document requests from DOE and the sites is a two-tiered process. The two tiers include an initial request for high level descriptive documents to identify facilities, buildings, processes, etc. that are not currently included in SEM, followed by secondary request for documents concerning the specific buildings, processes, labor categories, etc. limited to the elements not currently covered in the site profile.

The first tier requested documents include:

- Capital projects completed, changes in mission, or demolition/remediation during the scope period. A Project Office or Program Office can be a valuable resource in identifying those changes in mission/facilities/equipment.
- Current Site maps.
- Current facilities list indicating status (active/inactive/SSD, etc.).
- ORRs/RSAs for new facilities or revised processes completed during the scope period.
- The Site Industrial Hygiene Program/Plan.
- Current labor categories.

PTS researchers review these documents and compare them to the information in the current site profile in SEM to identify elements at the site that are not currently in the SEM site database. This information allows PTS to target specific areas where more detailed document requests may be made while being the least burdensome on the site.

Once PTS has identified facilities, equipment, or processes that have changed in the relevant time period, PTS makes a second request for the following types of documents that can hold information useful in updating DOL-SEM.

- Hazard assessments of new/modified processes and equipment
- Operations procedures for new/modified processes and equipment
- Procedures pertaining to managing, storing, handling and using hazardous chemicals.
- Current Site maps with building numbers
- Current labor category job descriptions and work locations
- Standing work instructions for facility maintenance, operations, or other activities, including labor category assignments and chemicals and processes used (welding, soldering, lubrication with lubricants used, etc.)
- Accident and injury illness records (ORPS, CAIRS, OSHA 300 Logs), internal or external assessment reports, and enforcement history, to identify incidents involving potential or actual chemical exposures or spills.

In addition to these efforts, information is also gathered from the public through the IAS input and from the DOL District Offices through the SEM Mailbox system. Thousands of documents have been gathered and reviewed by Paragon Researchers from these and similar data collection efforts to determine the potential applicability for inclusion in the SEM library. Any document that has the potential to provide information to enhance the SEM database is a candidate for inclusion. If the review of these documents identifies any information concerning specific work processes, buildings (name, number, and/or title, including informal aliases) where they are

performed, labor categories involved in the processes (including formal, informal, or site-specific titles and aliases), specific toxic substances involved in the processes, and incidents involving hazardous materials, the information is extracted and entered in the DOL-SEM spreadsheet. Researchers use their knowledge, skills, and experience to make these determinations. In the early years of SEM development, these documents were reviewed by teams of researchers to extract data for entry in SEM, providing a balanced consistent interpretation of documents for data extraction. Now individual researchers review the documents and extract data. To ensure accurate and consistent extraction of data from these documents, Paragon instituted a quality assessment process to review the major spreadsheet updates completed in each quarter. The procedure for these quality control (QC) assessments to validate the accuracy of data extraction from new documents used in major site profile revisions are delineated in Paragon SOP-SEM-17, March 28, 2023.

SOP-SEM-17 R0 Approved 3-28-23.p

Page 7 - 8 - Section 4.4 - New Spreadsheet Completion; 4.4.C - Recording Data on the SEM Worksheet. The size limitations for the spreadsheets are identified - referencing reducing size of spreadsheets. *The Board is concerned that legacy information about toxic exposures at sites is being lost to access by former workers and others in the conversion process to the 'closure spreadsheet.'* There are multiple citations in this section regarding closure spreadsheets. While the need to add deactivation and decommissioning work activities, labor categories and toxic substances to the existing SEM for a particular facility makes sense, it is troubling that a closure spreadsheet may replace the facility spreadsheet that already exists with current (or historical) information. A closure spreadsheet should not replace an existing spreadsheet, rather supplement the information in the existing spreadsheet. {See bottom of page 31- "Legacy contaminants encountered during closure activities to be added to these generic (closure) entries")

The Board is requesting information on the utilization of closure spreadsheets, specifically as it relates to augmenting or replacing facility spreadsheets that document legacy operations.

DOL Response: The consolidation process and data management technique documented in this section have no relation to or bearing on the development or content of a closure spreadsheet. Over time and multiple revisions, the file size of a SEM spreadsheet may grow to the point that it is difficult to use and manipulate, primarily because of unneeded formats introduced into revisions (one example is where a format such as cell borders is introduced into every cell in the spreadsheet, creating a spreadsheet with formatted cells to the maximum of the Excel program's capability). In such situations, the steps identified in SOP-SEM-03, Section 4.4 F can be used to consolidate the selected spreadsheet without losing any data used in SEM. The intent of this section is to copy and paste just the cell range containing data to a new tab, thereby deleting the extra formatting. The new cells will contain the values (numbers and text) that were copied. None of the other aspects carry over (i.e., formulas, colors, boundaries, title line, filters, freezes, or format variations), so the resulting file is typically much smaller in size.

Page 11- Closure spreadsheets;

DOL Response: The development of a site closure spreadsheet is to enhance and separate site closure operations from facility (production) activities. Closure profiles in SEM do not replace the site profiles for the DOE operating sites but only augment this information. The purpose for a closure profile is for SEM users to have information for potential exposures for processes and functions associated with the shutdown of DOE sites. Most sites have had remediation work as part of the normal life cycle of the site and these activities are included in the site profiles. When a site is no longer used for normal operations and the entire site is remediated that site becomes a candidate for development of a closure profile. For IAS application, the closure profile information is presented under the site name as part of the IAS display. Clicking on the "SEARCHES SPECIFIC TO THE SELECTED SITE" chooses if the user wants site operations activities or closure activities. DOL-SEM has separate profiles for site operations and closure activities because the content of operations and closure are vastly different and therefore the spreadsheets reflect these differences. There are four closure sites in SEM which include the following specific warning for which data set to view:

- SEARCHES SPECIFIC TO THE SELECTED SITE -- "Feed Materials Production Center (Fernald) Closure":
  Return to main Feed Materials Production Center profile – all pre-1990 plant operations and basic site services after 1990.

- SEARCHES SPECIFIC TO THE SELECTED SITE -- "Mound Plant Closure - 1995-2010":
  Return to main Mound Plant profile – all pre-1995 plant operations.

- SEARCHES SPECIFIC TO THE SELECTED SITE -- "Oak Ridge Gaseous Diffusion Plant (K-25) Closure - 1988 and beyond":
  Return to main Oak Ridge Gaseous Diffusion Plant (K-25) Plant profile – all pre-1988 plant operations and 1988-2020 basic site services.

- SEARCHES SPECIFIC TO THE SELECTED SITE -- "Rocky Flats Plant Closure - 1992-2005":
  Return to main Rocky Flats Plant profile – all pre-1992 plant operations and 1992-2005 basic site services.

This same warning is displayed on the public SEM and clicking on the link will display the operations data or closure data chosen.

Page 15 - Time Period Work Process was Performed

It is unclear when operating dates are to be identified and utilized in both legacy and closure activities.

The Board requests information on the utilization of dates, identifying processes for acquiring and validating such data, as well as whether and how date information is available to claims examiners, but not available on the public facing SEM.

DOL Response: If information is identified that provides the period that the combination of work process and toxic substance use existed, that information is entered in the SEM spreadsheet. Time period information is not always distinct and available from the reference materials. For example, the date that a new process or facility becomes operational may be indicated in a DOE document and recorded but those processes were often performed much earlier for testing and readiness reviews using the listed toxic materials. Additionally, a new facility would be under construction or modification with associated potential exposures. The dates an operation ended could also be misleading. An example is the end of underground nuclear weapons testing was misinterpreted as being the end to underground mining operations at the Nevada Test Site. Specific reasons for varying time periods for work differs from site-to-site, but generally are that various sources give different start and end dates (or not at all). Finding accurate start-stop dates for individual buildings and processes is extremely difficult (or nonexistent) at the work process level. As such, researchers try to determine dates but if unable to do so, leave the time period blank. This is the case for both site and closure operations.

SEM is a combination of spreadsheets and coding in the database software. There are several columns of data and information (including the dates) in the spreadsheet that are records for researchers for subsequent spreadsheet updates or for use other than in the adjudication of claims by DOL. These columns of data are not displayed in DOL-SEM but are informational only for researchers updating spreadsheets. The dates in the spreadsheets are not used in claim adjudication but are often useful in researching issues.

Page 21- Section E - Change Log
"The Change Log worksheet is used to briefly describe why the spreadsheet was revised ... "

The Board would like to have copies of the Change Log worksheet since 2014.

DOL Response: There appears to be some confusion concerning the application of the "Change Log" for SEM spreadsheets. As indicated in the Paragon Guidelines provided to the ABTSWH in January 2023, each site spreadsheet has a Change Log Tab as an integral part of the spreadsheet. SEM Site spreadsheets have a "Change Log" tab that briefly describes why each updated version of the spreadsheet was revised. SOP-SEM-03 Sections 4.4D, 4.5D and 4.6E provide instructions for recording update information for various types of spreadsheet updates.

The ABTSWH is asking for the Change Logs for all 140 SEM site data sets. The attachment, Samples of Site Change Logs, provides the change logs for 10 sites. These sites are:

- Nevada Test Site

- Savannah River Site
- Hanford
- Paducah GDP
- Portsmouth GDP
- Brookhaven National Lab
- De Soto Avenue
- Oak Ridge Y-12
- Kellex Pierpont
- Climax Uranium Mill in Grand Junction

These sites represent a diverse cross section of DOE sites with various missions as well as functions. They include examples of operating/production sites, environmental cleanup sites, national lab sites, gaseous diffusion plants, and remediation-only sites. The change logs provide a description for each update of the spreadsheet and represents a wide range of update scopes. Some updates are minor updates to enter new information received through EEOICPA claim adjudication; minor updates to add or correct entries based on public input; or major updates to add new facilities, buildings, work processes, labor categories, etc. that change over time. Upon review of this information, similar information can be provided for other specific sites.


SAMPLES OF SITE CHANGE LOGS.xlsx

Page 22 - Section F - Consolidating Overly Large SEM Spreadsheets
This section documents the mechanics of reformatting. The concern is that data may be lost or its evidentiary value diluted during this consolidation process.

The Board would like additional information on this process, including some examples of pre and post-consolidation spreadsheets since 2014.

DOL Response: During an update of the Hanford SEM in 2018, it was discovered that the spreadsheet had grown to a point where it was beyond the capability of our software/hardware to manage. The spreadsheet had become so large it was impossible for the researchers to insert new information or manipulate existing data. It was determined that significant file size expansions were often caused by a combination of cell determinants (type size and fonts, bolds, colors, borders, alignments in cells, etc.) that had been extended to the entire set of columns available on the excel spreadsheet (16,384 columns). The method to consolidate an overly large document was identified and documented to enable researchers to correct situations when this type of problem occurred. The process as described ensured that all data in the spreadsheet was retained and organized as intended to carry over to the revised spreadsheet. The technique to consolidate the memory required/size of individual Site spreadsheets has been utilized multiple times since it's development in late 2018. The consolidation process and data management technique

documented in this section have no relation to or bearing on the development or content of a closure spreadsheet.

The ABTSWH requested copies of spreadsheets; however, we are unable to release the spreadsheets due to classification issues and propriety information.

Page 24 - Section 4.6 - Major Revision of an Existing SEM Spreadsheet
"When the SEM Project Manager requests a major spreadsheet revision .... "

The Board would like information relating to the triggering of these requests by the SEM Project Manager. Is it new information, new site status (i.e., closure of facilities), lnformation from public meetings? How is the information tracked on triggering activities? How are the major spreadsheet revisions tracked and quality control assured?

DOL Response: The designation of spreadsheet revisions as major or minor is a Paragon management tool that relates to the extent and scope of the update that impacts the level of QC that is applied and used for work assignment considerations. Minor updates are usually very narrow in scope such as those resulting from information that is obtained through the SEM Mailbox or input from the public through the Internet Accessible SEM (IAS). One example is PTS received information from the public that an incident at a site occurred on a date different than that displayed in SEM. The resolution was to review the information and obtain the appropriate documents and make that single change to that SEM spreadsheet. Other common examples are questions coming through the SEM Mailbox asking for the appropriate labor category for functions based on individual claims records that are not currently found in SEM. These types of revisions would involve research to match the identified functions to the job descriptions at a site and add the newly identified category as an alias in SEM or add the new labor category as appropriate. Major revisions are revisions that are more significant in scope such as adding new facilities, etc.

Paragon Guidelines, Instructions, Requirements, and Tracking Records for Changes Made to the Site Exposure Matrix Profiles, January 2023

Page 5 - Summary

"All changes are made in accordance with established standard operating procedures . . Additionally, extensive records are kept for each piece of data in the SEM, including source documents, researcher notes, and change logs. Documents supporting all SEM entries, both new and in support of changes, are stored in the SEM library and are easily retrieved when needed."

As this summary documents the ease of tracking spreadsheet history of specific facilities, the Board is requesting all such information (beginning with the creation of the SEM) on the Hanford Site 105 N Reactor Building, and the Savannah River Site 183-R Chemical Building, be provided for the Board's review, as a starting point for review of such procedures.

DOL Response: To generate a listing of all documents used to source all information such as specific work processes, labor categories involved in the processes (including formal, informal, or site-specific titles and aliases), specific toxic substances involved in the processes, and incidents involving hazardous materials associated with the buildings requested would be a significant effort. The structure of the database does not lend itself to pull up all data associated with those buildings. Each independent item in the SEM spreadsheet would have source references but not necessarily tied to that building. For example, some generic profiles are "site wide" and would apply to all buildings. Capturing all the reference documents for all activities in the requested buildings would require the development of a tailored report run through SEM. Many of the documents in the SEM Library are Unclassified Controlled Information (UCI) that would have to be submitted to DOE for clearance to be released.

If the ABTSWH is interested in a specific process in these buildings, a shortened request could be accommodated to provide the ABTSWH with examples of the types of documentation used for entry of data in SEM. We suggest the ABTSWH work with DOL to structure a request that is manageable but will provide the needed information for review.

Additional request:
The Board also requests a copy of the contract between the U. 5. Department of Labor and Paragon Technical Services, Inc. for their scopes of work relative to the SEM.

DOL Response: Pending review by OSPE.