UTAH WATER QUALITY BOARD

CLASS V GENERAL PERMIT

UNDERGROUND INJECTION CONTROL (UIC) PROGRAM

UIC Permit Number: UTU-03-IP-8F54B7F

Box Elder County, Utah

Permit Issued to:

Golden Spike National Historic Site
P.O. Box 897
Brigham City, Utah, 84302

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PART I. AUTHORIZATION TO CONSTRUCT AND INJECT

Pursuant to the Underground Injection Control (UIC) Program Regulations of the Utah Water Quality Board (UWQB) codified in the Utah Administrative Code (UAC) R317-7,

Golden Spike National Historic Site
P.O. Box 897
Brigham City, Utah, 84302

is hereby authorized to operate one (1) existing Class V injection well in Box Elder County, Utah. A general location map is included as Attachment A.

Golden Spike National Historic Site is a National Park Service (NPS) facility commemorating the completion of the Transcontinental Railroad at Promontory, Utah. The injection well pertaining to this permit consists of a floor drain in the maintenance area for servicing and repairing the replica steam locomotives used for exhibition. This floor drain leads to an oil separator, distribution box, and to a leach field for disposal.

Golden Spike National Historic Site (GOSP) is located at Promontory, Utah east of the Great Salt Lake. GOSP lies within a valley area at an elevation of 4918 feet above mean sea level (msl). The Great Salt Lake is located approximately 10 miles west of GOSP. A map showing the area of review including the Class V well is included as Attachment B.

All references to UAC R315-2-3, UAC R317-7, and to Title 40 of the Code of Federal Regulations (40 CFR) are to all regulations that are in effect on the date that this permit becomes effective. The following attachments are incorporated into this permit:

Attachment A ....General Location Map of Golden Spike National Historic Site, Box Elder County.

Attachment B ....Map of the UIC Area of Review including the Class V Injection Well

Attachment C ....Technical Report

Attachment D ....Plan for Plugging and Abandonment of Class V Wells

Attachment E ....Monitoring Parameters and Schedule

Attachment F.....Reporting Tables

Attachment G ....UIC BMP Plan

This permit consists of a total of **15** pages plus the above 7 attachments. Further, it is based upon representations made by the permittee and other information contained in the administrative record. **It is the responsibility of the permittee to read and understand all provisions of this permit.**

This permit shall become effective October 10, 2016.

This permit expires at midnight on October 9, 2026.

Signed this 5 day of October, 2016

This permit and the authorization to inject shall be issued for ten (10) years as described in Part III A of this permit unless terminated.

Walter L. Baker, P.E.
Director
Utah Division of Water Quality

PART II. GENERAL PERMIT CONDITIONS

A. EFFECT OF PERMIT

The permittee is allowed to engage in underground injection in accordance with the conditions of this permit. The permittee, authorized by this permit, shall not construct, operate, maintain, convert, plug, abandon or conduct any other injection activity in a manner that allows the movement of fluid containing any contaminant into underground sources of drinking water (USDW), if the presence of that contaminant may cause a violation of any primary drinking water standard under the Utah Public Drinking Water Administrative Rules, UAC R309-200 and 40 CFR Part 141, or may otherwise adversely affect the health of persons. Any underground injection activity not specifically authorized in this permit is prohibited. Compliance with this permit does not constitute a defense to any action brought under the Utah Water Quality Act (UWQA) Title 19, Chapter 5 Utah Code Annotated 1953, or any other common or statutory law or regulation. Issuance of this permit does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local law or regulations. Nothing in this permit shall be construed to relieve the permittee of any duties under applicable regulations.

B. SEVERABILITY

The provisions of this permit are severable. If any provision of this permit or the application of any provision of this permit to any circumstance is held to be invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

C. CONFIDENTIALITY

In accordance with Utah Code 19-1-306 (Records of the Department of Environmental Quality), Utah Code 63G-2-309 (Confidentiality Claims), and Utah Code 19-5-113 (DWQ Records and Reports Required by Owners/Operators) any information deemed by the permittee to be entitled to trade secret protection submitted to the UWQB pursuant to this permit may be claimed as confidential by the submitter. Any such claim must be asserted at the time of submission by stamping the words "Confidential Business Information" on each page containing such information. If no claim is made at the time of submission, the UWQB may make the information available to the public without further notice. Claims of confidentiality may be denied by the UWQB according to the procedures detailed in Utah Code 63G-2 and the federal Freedom of Information Act (FOIA). Claims of confidentiality for the following information will be denied as per UAC R317-7-9.7:

1. The name and address of the permittee.

2. Information that deals with the existence, absence or level of contaminants in drinking water.

D. CONDITIONS APPLICABLE TO ALL UIC PERMITS (40CFR144.51)

1. Duty to Comply (40CFR144.51(a))

The permittee shall comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Safe Drinking Water Act and the UWQA and is grounds for enforcement action, permit termination, revocation and re-issuance, modification, or for denial of a permit renewal application; except that the permittee need not comply with the provisions of this permit to the extent and for the duration such noncompliance is authorized by an emergency permit issued in accordance with UAC R317-7-8 (40 CFR 144.34). Such noncompliance may also be grounds for enforcement action under the Utah Solid and Hazardous Waste Act (USHWA), Title 19, Chapter 6, Utah Code Annotated 1979.

2. Duty to Reapply (40CFR144.51(b))

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The permittee shall submit a complete permit renewal application at least 180 days before this permit expires.

3. Need to Halt or Reduce Activity Not a Defense (40CFR144.51(c))

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate (40CFR144.51(d))

The permittee shall take all reasonable steps to minimize or correct any adverse impact on the environment resulting from noncompliance with this permit.

5. Proper Operation and Maintenance (40CFR144.51(e))

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this permit.

6. Permit Actions (40CFR144.51(f))

The Executive Secretary may, for cause or upon request from the permittee, modify, revoke and re-issue, or terminate this permit in accordance with UAC R317-7-5.4, R317-7-9.6 (40 CFR 144.39 and 144.40), and R317-7-5.8. Also, the permit is subject to minor modifications for cause as specified in UAC R317-7-9.6 (40 CFR 144.41). The filing of a request for a permit modification, revocation

and re-issuance, or termination, or the notification of planned changes, or anticipated noncompliance on the part of the permittee, does not stay the applicability or enforceability of any permit condition.

7. Property Rights (40CFR144.51(g))

This permit does not convey any property rights of any sort, or any exclusive privilege.

8. Duty to Provide Information (40CFR144.51(h))

The permittee shall furnish to the Executive Secretary within a time specified, any information which the Executive Secretary may request to determine whether cause exists for modifying, revoking and re-issuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Executive Secretary upon request, copies of records required to be kept by this permit.

9. Inspection and Entry (40CFR144.51(i))

The permittee shall allow the Executive Secretary, or an authorized representative, upon the presentation of credentials and other documents as may be required by the law, to:

a) Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;

b) Have access to and copy, at reasonable times, any records that are kept under the conditions of this permit;

c) Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

d) Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the SDWA and / or UWQA any substances or parameters at any location.

10. Monitoring and Records (40CFR144.51(j))

a) Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.

b) The permittee shall retain records of all monitoring information, including the following:

(1) Calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit, for a period of at least 3 years from the

date of the sample, measurement, or report. This period may be extended by request of the Executive Secretary at any time; and

(2) Records of all data required to complete the permit application form and technical report for this permit and any supplemental information submitted under UAC R317-7-9.2 for a period of at least three years from the date the application was signed. This period may be extended by request of the Executive Secretary at any time.

(3) The nature and composition of all injected fluids until three years after the completion of any plugging and abandonment procedures specified in Part III of this permit. The Executive Secretary may require the owner or operator to deliver the records to the Executive Secretary at the conclusion of the retention period.

c) Records of monitoring information shall include:

(1) The date, exact place, and time of sampling or measurements;
(2) The individual(s) who performed the sampling or measurements;
(3) A precise description of sampling methodology, sample handling or custody, and all quality assurance methods used;
(4) The date(s) analyses were performed;
(5) The names of individual(s) who performed the analyses;
(6) The analytical techniques or methods used; and
(7) The results of such analyses.

11. Signatory Requirements (40CFR144.51(k))

All reports or other information, submitted as required by this permit or requested by the Executive Secretary, shall be signed and certified in accordance with UAC R317-7-9.3 (40 CFR 144.32).

12. Reporting Requirements (40CFR144.51(l))

a) Planned Changes

The permittee shall give written notice to the Executive Secretary, as soon as possible, of any planned physical alterations or additions to the UIC-permitted facility. The UIC-permitted facility includes:

Two mechanics maintenance trenches that flow into a floor drain out to an oil/water separator then to a subsurface fluid distribution system.

b) Anticipated Noncompliance

The permittee shall give advance notice to the Executive Secretary of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements.

c) Permit Transfers

This permit is not transferable to any person except in accordance with UAC R317-7-9.6 (40 CFR 144.38). The Executive Secretary may require modification or revocation and re-issuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Safe Drinking Water Act and / or the UWQA.

d) Monitoring Reports

Quarterly monitoring reports shall be submitted to the Executive Secretary according to the following schedule:

Quarter		Report Due On:
lst Quarter	(Jan 1 – March 31)	April 15
2nd Quarter	(April 1 – June 30)	July 15
3rd Quarter	(July 1 – September 30)	October 15
4th Quarter	(October 1 – December 31)	January 15

e) Compliance Schedule Reports

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule specified in Part III B of this permit shall be submitted no later than 30 days following each schedule date.

f) Endangering Noncompliance Reporting

The permittee shall report to the Executive Secretary any noncompliance that may endanger health or the environment, as follows:

(1) Twenty-four Hour Reporting

Endangering noncompliance information shall be provided orally within 24 hours from the time the permittee becomes aware of the circumstances. Such reports shall include, but not be limited to, the following information:

(i) Any monitoring or other information that indicates any contaminant may cause an endangerment to a USDW, or

(ii) Any noncompliance with a permit condition, or malfunction of the injection system, which may cause fluid migration into or between USDWs.

(2) Five-day Reporting

A written submission shall be provided within five days of the time the permittee becomes aware of the circumstances of the endangering noncompliance. The written submission shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

g) Other Noncompliance

The permittee shall report all instances of noncompliance not reported under 12d) (Monitoring Reports), 12e) (Compliance Schedule Reports), or 12f) (Endangering Noncompliance Monitoring) of this section in the next Monitoring Report. The reports shall contain a description of the noncompliance and its cause, the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance.

h) Other Information

When the permittee becomes aware of a failure to submit any relevant facts in the permit application or submitted incorrect information in a permit application or in any report to the Executive Secretary, the permittee shall submit such facts or information within 10 days after becoming aware of the failure to submit relevant facts.

13. Requirements Prior to Commencing Injection (40CFR144.51(m))

For new injection well authorized by individual permit, a new injection well may not commence injection until construction is complete, and

a) The permittee has submitted notice of completion of construction to the Executive Secretary; and

b) Either of the following:

(1) The Executive Secretary has inspected or otherwise reviewed the new injection well and finds it is in compliance with the conditions of the permit; or

(2) The permittee has not received notice from the Executive Secretary of his or her intent to inspect or otherwise review the new injection well within 13 days of the date the notice in paragraph 13a)(1) of this

section, in which case prior inspection or review is waived and the permittee may commence injection. The Executive Secretary shall include in his notice a reasonable time period in which he shall inspect the well.

For new injection wells authorized by an area permit under UAC R317-7-7(C) (40 CFR 144.33(c)), requirements prior to commencing injection shall be specified in Part III of the permit.

14. Notification Prior to Conversion or Abandonment. (40CFR144.51(n))

The permittee shall notify the Executive Secretary at such times as the permit requires before conversion or abandonment of the well or in the case of area permits before closure of the projects.

15. Plugging and Abandonment Requirements. (40CFR144.51(o))

A Class I and III permit shall include and a Class V permit may include, conditions for developing a plugging and abandonment plan that meets the applicable requirements of UAC R317-7 to ensure that plugging and abandonment of the well will not allow the movement of fluids into or between USDWs. If the plan meets the plugging and abandonment requirements of UAC R317-7, the Executive Secretary shall incorporate it into the permit as a permit condition. Where the review of the plan submitted in the permit application indicates the plan is inadequate, the Executive Secretary may require the applicant to revise the plan, prescribe conditions meeting the requirements of this paragraph, or deny the permit. For purposes of this paragraph, temporary or intermittent cessation of injection operations is not abandonment. Requirements for implementing the approved plugging and abandonment plan are specified in Part III F of this permit.

16. Plugging and Abandonment Report. (40CFR144.51(p))

Requirements for the submittal of a plugging and abandonment report shall be specified in Part III F(5) of this permit.

17. Duty to Establish and Maintain Mechanical Integrity. (40CFR144.51(q))

a) The owner or operator of a Class I or III well permitted under UAC R317-7 shall establish prior to commencing injection or on a schedule determined by the Executive Secretary, and thereafter maintain mechanical integrity as defined in 40CFR146.8.

b) When the Executive Secretary determines that a Class I or III well lacks mechanical integrity pursuant to 40CFR146.8, he shall give written notice of his determination to the owner or operator. Unless the Executive Secretary requires immediate cessation, the owner or operator shall cease injection into the well within 48 hours of receipt of the Executive Secretary's determination. The Executive Secretary may allow plugging

of the well pursuant to the requirements of UAC R317-7 or require the permittee to perform such additional construction, operation, monitoring, reporting and corrective action as is necessary to prevent the movement of fluid into or between USDWs caused by the lack of mechanical integrity. The owner or operator may resume injection upon written notification from the Executive Secretary that the owner or operator has demonstrated mechanical integrity pursuant to 40CFR146.8.

c) The Executive Secretary may allow the owner/operator of a well which lacks mechanical integrity pursuant to 40CFR146.8(a)(1) to continue or resume injection, if the owner or operator has made a satisfactory demonstration that there is no movement of fluid into or between USDWs.

18. Report on Permit Review

Within 30 days after receipt of this permit, the permittee shall report to the Executive Secretary that he has read and is personally familiar with all terms and conditions of this permit.

19. Electronic Reporting

In addition to submittal of the hard copy data, the permittee shall electronically submit required monitoring data in the electronic format specified by the Executive Secretary.

20. Penalties for Violations of Permit Conditions (UCA 19-5-115)

Any person who violates a permit requirement is subject to civil penalties, fines, and other enforcement action under the UWQA and may be subject to such actions pursuant to USHWA. Any person who willfully violates permit conditions may be subject to criminal prosecution.

PART III. SPECIFIC PERMIT CONDITIONS

A. DURATION OF PERMIT (R317-7-9.5 and 40CFR144.36)

This UIC Class V permit shall be issued for ten (10) years. The Executive Secretary shall review this permit once every ten (10) years beginning on the effective date of the permit to determine whether it should be modified, revoked and re-issued, terminated, or undergo minor modification according to the requirements of 40CFR144.36, 40CFR144.39, 40CFR144.40, and 40CFR144.41 which are incorporated by reference in R317-7-1.

B. SCHEDULE OF COMPLIANCE (40CFR144.53)

There are no compliance items for this renewal cycle of the permit.

C. NON-ENDANGERMENT STANDARD (R317-7-5.3 and 40CFR144.12)

Underground injection activities; including construction, operation, maintenance, conversion, plugging, and abandoning; shall be conducted in such a way as to prevent the movement of fluid containing any contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation (Utah Primary Drinking Water Standards R309-200-5), or which may adversely affect the health of persons. Underground injection activities shall not be authorized if they may cause a violation of any Utah Ground Water Quality Rules that may be promulgated by the Utah Water Quality Board.

D. OPERATING REQUIREMENTS

In addition to the non-endangerment standard of Part III C of this permit, the following requirements apply to the operation of the Class V injection wells associated with this permit:

1. UIC BMP Plan

Permittee shall maintain a UIC BMP Plan that addresses pollution control, employee education and training, operations and maintenance, and policy and regulation. These categories encompass a comprehensive range of actions that together will help ensure that the facility is operated and maintained in a manner that meets the requirements of the permit and protects the groundwater.

E. MONITORING, RECORDING, AND REPORTING REQUIREMENTS

1. Injectate Characterization

The permittee shall monitor the nature of injected fluids with sufficient frequency to yield representative data on its characteristics.

a) Analytes for Monitoring
Samples shall be analyzed for the parameters listed in Attachment E of the permit. Utilizing proper chain-of-custody procedures, monitoring samples must be sent to a State-certified lab for analyses. Sample analysis shall comply with applicable analytical methods cited and described in Table IB or 40 CFR 136.3 or in Appendix III of 40 CFR 261 or in certain circumstances by other methods that have been approved by the Executive Secretary.

Field parameters shall be determined immediately prior to collection of all water quality samples and shall include pH, temperature, and specific conductivity.

b) Sampling Schedule
Samples shall be collected and analyzed according to the sampling schedule in Attachment E of the permit.

2. Injection Volume

The permittee shall monitor the injection volume semi-monthly, and daily recording of injected and produced fluid volumes as appropriate and note any changes.

3. Reporting

The permittee shall submit the following in quarterly reports to the Executive Secretary:

a) Results of any required monitoring acquired during the period covered by the quarterly report.

b) Results of any periodic testing, not included in the monitoring in a), completed during the period covered by the quarterly report.

c) Summary of reporting required by Part II D(12) of this permit.

F. PLUGGING AND ABANDONMENT REQUIREMENTS (40CFR146.10 and R317-7-10.5)

1. Requirement for Plugging and Abandonment Plan

The permittee shall develop a plugging and abandonment plan (hereafter, the Plan) for the Class V well as allowed by Part II D(15) of this permit. The approved Plan will become a permit condition of this permit and be incorporated into the permit as Attachment D.

2. Notice of Plugging and Abandonment

The permittee shall notify the Executive Secretary in writing no later than 45 days before planned conversion or abandonment of the well(s). This notice shall also include:

a) Well Condition Report

The permittee shall provide a report on the current condition of the well in order to update, supplement or complete any information found in the Plan.

b) Individual Plugging and Abandonment Plan

The permittee shall also submit an individual plugging and abandonment plan for each well to be plugged and abandoned. In coordination with the Well Condition Report, this plan shall modify and supersede the Plan, as necessary, to ensure adequate plugging and abandonment of the well.

The plugging and abandonment of the well shall be subject to prior Executive Secretary approval of the individual plugging and abandonment plan. The Executive Secretary reserves the right to grant conditional approval of any individual plugging and abandonment plan to ensure adequate plugging of a well.

3. Emergency Well Conversion or Plugging and Abandonment

Emergency conversion or abandonment of wells is allowed by this permit, conditional upon the following requirements:

a) The permittee will seek oral approval from the Executive Secretary for emergency well conversion or abandonment no less than 24 hours prior to the emergency action.

b) The permittee will subsequently submit a written request for Executive Secretary approval of emergency well conversion or abandonment, with appropriate justification, within five (5) working days after receiving oral approval.

c) The Executive Secretary reserves the right to modify any oral approval for emergency action, subsequent to review of the written request.

d) Oral or written approval from the Executive Secretary for emergency well conversion or abandonment will not waive or absolve the permittee from its responsibility to comply with the conditions of this permit, including requirements of the Plan.

4. Plugging and Abandonment

The permittee shall plug and abandon the well(s) consistent with 40 CFR 146.10 and 144.89, as provided for in the Plan, and any conditions issued by the Executive Secretary in approval of the individual plugging and abandonment plans required by Part III G(2) of this permit.

5. Plugging and Abandonment ("As-Plugged") Report

Within 60 days after permanently or temporarily plugging and abandoning a well, the permittee shall submit a Plugging and Abandonment Report to the Executive Secretary. The report shall be certified as accurate by the person who performed the plugging operation, and shall consist of either:

a) A statement that the well was plugged in accordance with the plan(s) previously submitted to, and all conditions of approval provided by, the Executive Secretary; or

b) If the actual plugging differed from the approved plan(s), a statement and diagrams defining the actual plugging and why the Executive Secretary should approve such deviation. Any deviation from the previously approved individual plugging and abandonment plans required by Part III G (1) of this permit which may endanger waters of the State of Utah, including USDWs, is cause for the Executive Secretary to require the operator to re-plug the well.

6. Inactive or Temporarily Plugged Wells

a) Inactive Wells

After cessation of operation of a well(s) for two years the permittee shall plug and abandon the well(s), unless the permittee requests and receives a variance from this requirement from the Executive Secretary prior to the end of the two year cessation period, based on:

1) A demonstration that the well will be used in the future; and

2) A satisfactory description of actions or procedures that the permittee will take to ensure that the well will not endanger an USDW during the period of temporary abandonment. These actions and procedures shall include compliance with technical requirements applicable to active injection wells unless waived by the Executive Secretary.

b) Temporary Plugging of a Well

Temporary plugging of a well shall consist of:

(1) Submittal of a notice of well conversion.

(2) Submittal of a well condition report and an individual plugging plan, for Executive Secretary approval.

(3) Submittal of an "As-Plugged" Report as required by Part III F(5) of this permit.

c) Temporarily plugged or inactive wells may be reactivated at the discretion of the permittee after:

(1) Submitting a written notification of intent to reactivate to the Executive Secretary, and

(2) Receipt of Executive Secretary written approval to reactivate the well.

G. FINANCIAL RESPONSIBILITY

The federal government is self-insured and therefore meets the requirements of Part G. See United States Fidelity & Guaranty Co. v. United States, 728 F. Supp. 651, 653 (D. Utah 1989). Since the federal government is self-insured, the federal government should be treated as other insurers.

H. ADDITIONAL CONDITIONS (40CFR144.52)

There are no additional permit conditions.

Statement of Basis for New Class V Individual Permit

UIC Permit No. UTU-03-IP-8F54B7F

October, 2016

National Park Service
Golden Spike National Historic Site
P.O. Box 897
Brigham City, Utah 84302

Golden Spike National Historic Site, Box Elder County, Utah

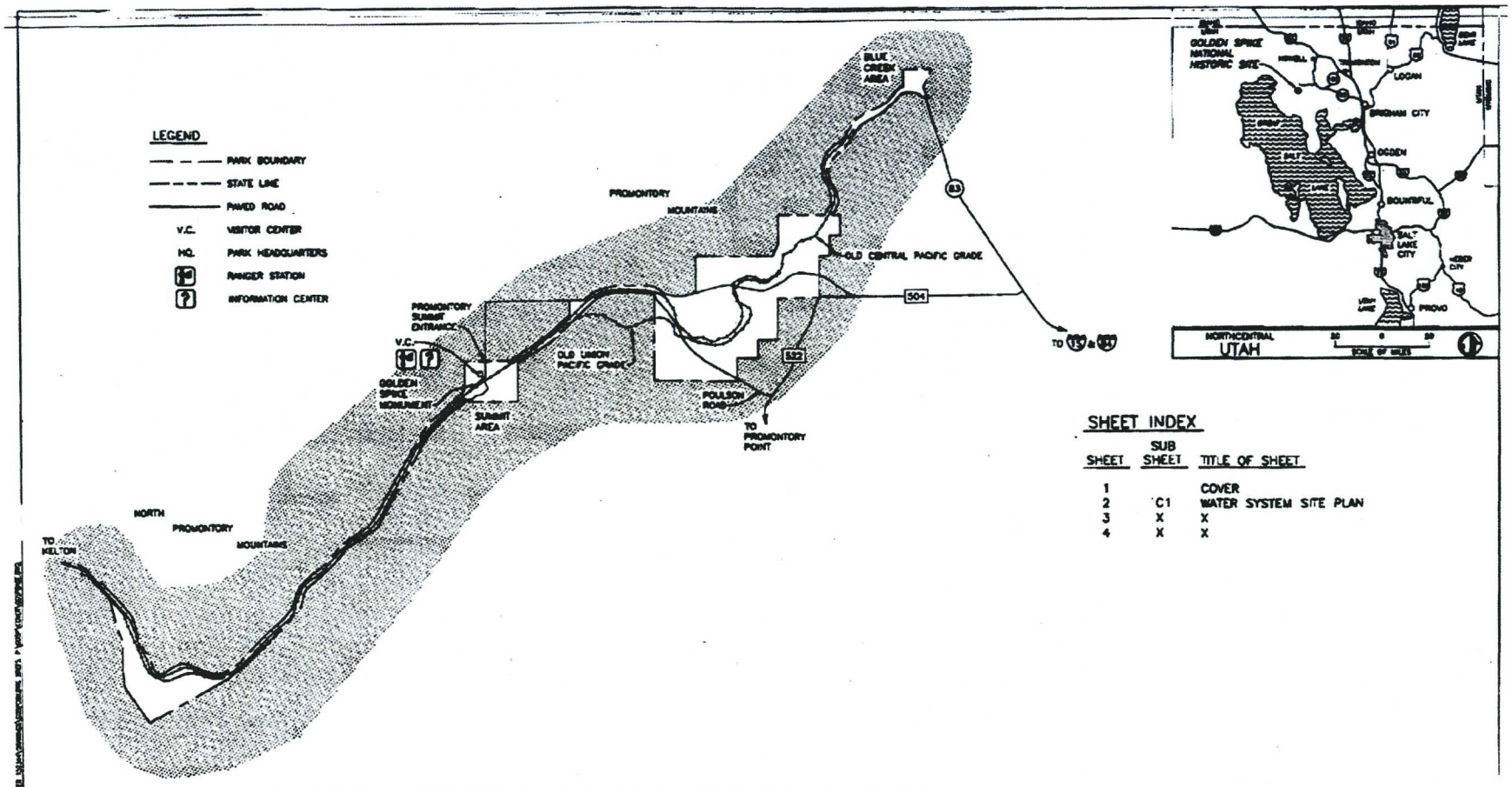
Golden Spike National Historic Site, (GOSP) has made a request for the renewal of an Underground Injection Control (UIC) Class V individual permit for the continued operation of a wash/oil interceptor collection system located in Box Elder County, Utah. GOSP is a National Park Service (NPS) facility commemorating the completion of the Transcontinental Railroad at Promontory, Utah.

This is the first renewal for the permit and there are no major modifications. The Schedule of Compliance Items in Part III B have been removed as they were successfully completed. One of those items being the development of a UIC Best Management Practices (BMP) Plan which has been added to the permit as Attachment G. The basis for renewing the UIC Class V permit is to continue to ensure compliance with the Utah UIC administrative rules for Class V injection well activities, R317-7. In keeping with National Historic Site rules and regulations, the options for GOSP are limited. The Division of Water Quality worked closely with GOSP to determine that a UIC Class V permit would be a reasonable option in that it would allow them to service and maintain their replica steam locomotives in an environmentally responsible way while keeping their National Historic Site designation. The injection well pertaining to this permit consists of a floor drain in the maintenance area for servicing and repairing the replica steam locomotives used for exhibition. This floor drain leads to an oil separator, distribution box and to a leach field for disposal.

Sampling occurs semi-annually from the leach field distribution box to demonstrate compliance with current MCL's for drinking water standards and health advisories.

ATTACHMENT A

GENERAL LOCATION MAP OF GOLDEN SPIKE NATIONAL HISTORIC SITE, BOX ELDER COUNTY



SCALE:	AS SHOWN	DATE:	NOVEMBER 2010
S.O. NO.:	112314	FILE:	112314F10
DSN/DWN:	EJK/WJH	CHK:	

Baker

Michael Baker Jr., Inc.
Moon Township, Pennsylvania

FIGURE 1
FACILITY MAP
GOLDEN SPIKE NATIONAL HISTORIC SITE
PROMONTORY, UTAH

ATTACHMENT B

MAP OF THE UIC AREA OF REVIEW INCLUDING THE CLASS V INJECTION WELL

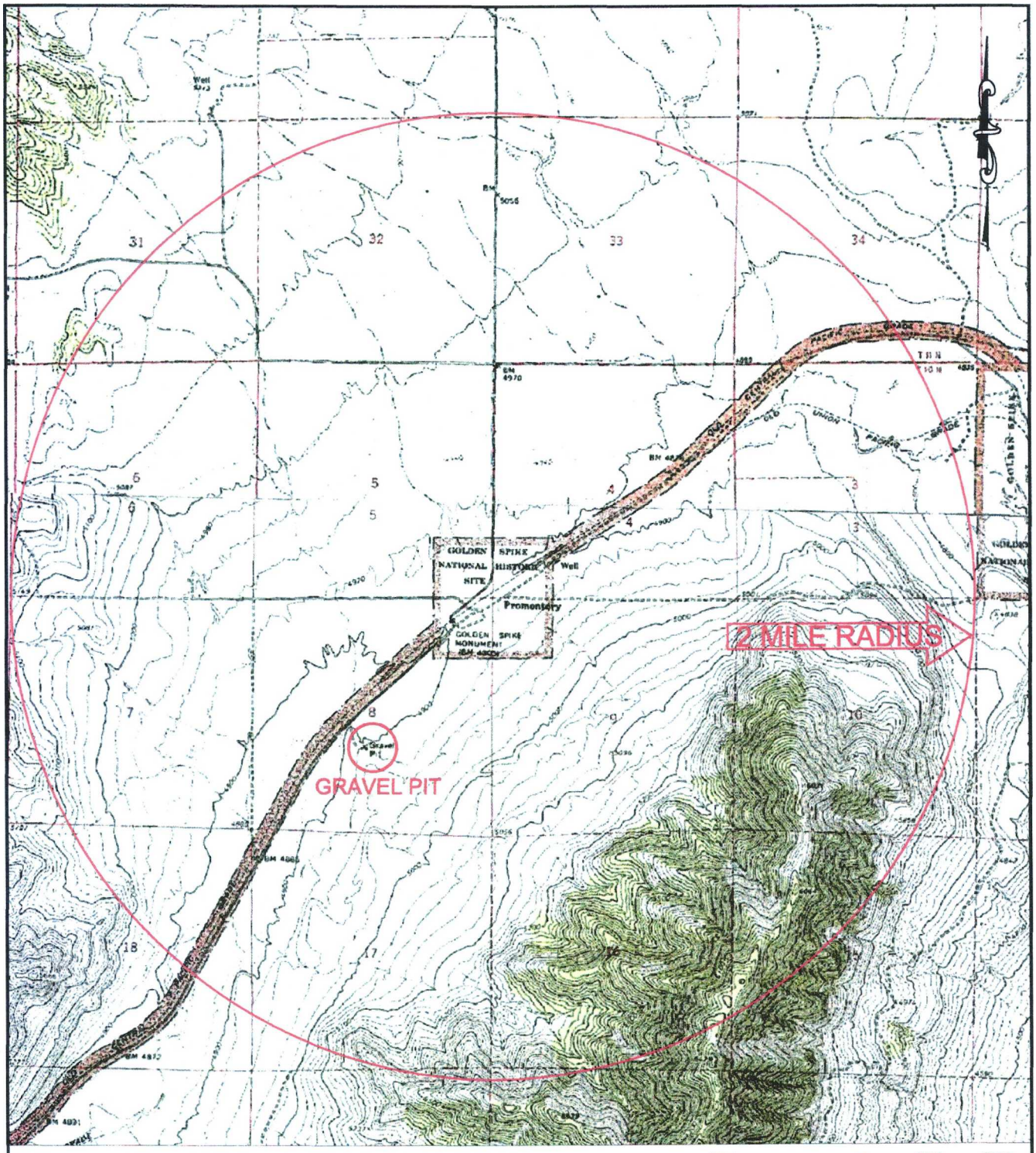


FIGURE 3
AREA OF REVIEW
GOLDEN SPIKE NATIONAL HISTORIC SITE
PROMONTORY, UTAH

SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLES.

SCALE:	1" = 3000'	DATE:	NOVEMBER 2010
S.O. NO.:	112314	FILE:	112314F02
DSN/DWN:	EJK/WJH	CHK:	

Baker Michael Baker Jr., Inc.
Moon Township, Pennsylvania

ATTACHMENT C

TECHNICAL REPORT

Part A – Determination of Area of Review (AOR)

(R317-7-2.4; 40CFR146.6)

A fixed radius of 2 miles from the injection well (circumscribed area) will apply for the area of review (AOR) for the oil inceptor well (existing injection well) at Golden Spike National Historic Site (NHS) in accordance with Utah regulations.

Part B - Permit Application Maps *(Part B information is included as an attachment)*

1. Map of Facility and Well (or Project Area)
(R317-7-9.1(D)(7); 40CFR144.31(e)(7))
2. Map of Area of Review (AOR)
(R317-7-9.1(D)(9))
3. Maps and Cross Sections of USDWs
(R317-7-9.1(D)(11))
4. Maps and Cross Sections of Local Geologic Structure and Lithology
(R317-7-9.1(D)(12))
5. Maps and Cross Sections of Regional Geologic and Hydrologic Setting
(R317-7-9.1(D)(13))

Refer to Attachments for the Part B maps.

Part C – Tabulation of Artificial Penetration Data

(R317-7-9.1(D)(10))

Drinking water well located 1/3 mile upgradient from existing injection well/leach field system. The well depth is 423 feet deep with the pump (i.e., 5 horsepower) set at 413 feet. The well was established in 1967 and has been in continual use since then. Water level is at 378.54 feet below ground surface (bgs) when construction was completed. The well perforations consist of 240 torch cut slots 1/8-inch wide and six inches long, staggered around the casing between 383 and 413 feet bgs.

Part D – Corrective Action Plan

(R317-7-9.1(D)(21); 40CFR144.55)

Not applicable to shallow injection wells.

Part E – Formation Testing Program

(R317-7-9.1(D)(15))

Not applicable to shallow injection wells.

Part F – Well Stimulation Program

(R317-7-9.1(D)(16))

Not applicable to shallow injection wells.

Part G – Injection Well Construction Plan

(R317-7-9.1(D)(25); 40CFR144.82(a)(1))

Not applicable - Existing injection well.

Part H – Injection Well Construction Details

(R317-7-9.1(D)(18))

See as-built diagrams provided as an attachment to this technical report.

Part I – Injection Well Operation Plan and Procedures

(R317-7-9.1(D)(14); R317-7-9.1(D)(17); 40CFR144.52)

Two locomotives are housed and maintained in a maintenance building on site. This maintenance building is equipped with a floor drain system to capture the wash water and associated runoff generated during maintenance activities. Maintenance wash is routed through an oil/water inceptor (or separator) where the oil and associated content are separated from the water. The oily residue is stored in a chamber of the inceptor and the water stream is then gravity drained to an adjacent leach field.

(a) Average and maximum daily rate and volume of the fluid to be injected

Fluid injection into the floor drain is generally sporadic on a daily basis. A daily average is 25 gallons per day based on the type and amount of repair and service conducted.

(b) Average and maximum injection pressure

There is no injection pressure associated with the system. The system is gravity fed and flows based on the introduction of fluids.

(c) Source and an appropriate analysis of the chemical, physical, radiological and biological characteristics of injection fluids

Maintenance waste sources include: de-minimis quantities of industrial gear oil, steam cylinder valve oil, locomotive bearing journal oil, synthetic air compressor oil, grease, and laundry detergent. (Note: the park is looking into hiring a laundry service so that rags do not have to be laundered on-site, so it is possible that the laundry detergent could be removed as a possible source). No specific analyses of the fluids/materials injected into the system are available. The fluids are standard/normal oils, greases and laundry detergents. Material Safety Data Sheets (MSDSs) for the materials used at the facility are included in the Attachments.

Recent analysis has been conducted on the effluent from the distribution box prior to introduction to the leach field. This analysis was for volatile organic compounds (VOCS), semivolatile organic compounds (SVOCS), polychlorinated biphenyls (PCBs) and metals. The analyses results indicated lead was detected at a concentration of 0.019 mg/L, above the USEPA Federal Drinking Water Standard (or Maximum Contaminant Level – MCL) of 0.015 mg/L. Other constituents were detected but below MCLs or were constituents for which standards have not been established.

The permit shall establish injection operation requirements including any maximum injection volumes and/or maximum wellhead pressures necessary to assure that:

(i) fractures are not initiated in the confining zone, if applicable,

(ii) injected fluids do not migrate into any underground source of drinking water,

(iii) formation fluids are not displaced into any underground source of drinking water, and

(iv) injection between the outermost casing protecting USDWs and the well bore does not occur.

Because the system is gravity fed, maximum injection pressure will never be sufficient enough so as to initiate new fractures or propagate existing fractures in the confining zone adjacent to the USDWs and will not cause the movement of injection or formation fluids into an underground source of drinking water. Additionally, maintenance fluids will not be injected between the outermost casing protecting underground sources of drinking water and the well bore. Maintenance wastes enter the inceptor by way of pipe located in the maintenance facility, which is protected on all sides by concrete inside the facility (see as-built diagrams). See Monitoring, Recording, and Reporting Plan for more detail.

Part J – Monitoring, Recording, and Reporting Plan

(R317-7-5.9; R317-7-9.1(D)(20); 40CFR144.52(a)(5); 40CFR144.52(a)(8); 40CFR144.54)

Submit a monitoring, recording, and reporting plan, including maps, for demonstrating and ensuring the protection of USDWs R317-7-9.1(D)(20). In the plan, the applicant must

(i) identify the types of tests (including mechanical integrity tests (MITs)), methods, and equipment used to generate the monitoring data,

(ii) address the proper use, maintenance and installation, when appropriate, of monitoring equipment or methods, and

(iii) propose type, intervals, and frequency sufficient to yield data that are representative of the monitored activity.

Monitoring, Recording, and Recordkeeping Plan

Responsibility

Park staff is responsible for implementing the monitoring, recording, and record keeping plan.

Types of Monitoring Tests, Methods, Frequency and Equipment Used

Compliance Monitoring

Golden Spike NHS uses a combination of Best Available Technology (BAT) and Groundwater Quality Monitoring for compliance monitoring of the oil inceptor system.

One water sample is collected from the leach field distribution box semi-annually (i.e., twice per year). (refer to Figure 2 for location of leachfield). The water sample is sent to a Utah-certified lab and is tested for compliance with the Utah Groundwater Quality Standards (Table 1 or R 317-6-2.1), specifically the following analytes: Volatile Organic Compounds (VOCs), Semi Volatile Organic Compounds (SVOCs), RCRA 8 Metals and Polychlorinated biphenyls (PCBs).

Visual observations are conducted daily during operations and monthly when the system is not being operated (40 CFR §146.23(b)(2)(iii)). Visual observations, at a minimum, include: an observation of the nature of fluids injected and an observation of the cumulative volume of the fluids injected. Additionally, the floor drain is visually inspected to ensure free drainage and the surrounding concrete surfaces are visually inspected for cracks monthly.

Demonstration of Mechanical Integrity (40 CFR 146.23(b)(3); 40 CFR 146.8)

This gravity-fed leach field system cannot be pressure tested. However, water samples are collected from the leach field distribution box semi-annually to demonstrate compliance with Utah Groundwater Quality Standards. The purpose of this sampling is to demonstrate that the potential contaminants in fluids entering the leachfield system are detected in a timely manner so as to prevent movement of contaminants to the vadose zone or subsequently to potential drinking water sources.

Equipment Maintenance

The oil inceptor is pumped-out (cleaned) semi-annually, at the same time water samples are collected from the distribution box. Since the summer months are when the most maintenance wash is generated, the inceptor will be cleaned at the beginning of the busy season (early July) and again when the locomotives shut down (late October).

No monitoring equipment is used to collect the samples. As such, maintenance of monitoring equipment is not needed.

Recordkeeping

Maintenance, sampling and monitoring records and information (e.g., maintenance log books, disposal records, and analytical data from monitoring events) are maintained at the Engine House at Golden Spike NHS. Records will be maintained on-site until at least the next permit review.

Reporting

A written letter report will be provided to UDEQ at least annually. The letter report will summarize the results of the compliance monitoring performed. Such summary shall include monthly records of injected fluids, and any major changes in characteristics or sources of injected fluid. Previously submitted information may be included by reference.

Part K – Contingency Plan

(R317-7-9.1(D)(19))

If permit limits are exceeded, operations and/or maintenance activities at the site would be suspended until appropriate corrective action is taken in coordination with UDEQ.

Part L – Plugging and Abandonment Plan

(R317-7-6.6; R317-7-9.1(D)(23); 40CFR144.52(a)(6); 40CFR146.10)

Submit a plugging and abandonment plan that meets the requirements of R317-7-6.6 and is acceptable to the Director.

A. General Well Closure Procedures

Prior to abandoning the maintenance waste collection system, GOSP shall close the oil inceptor well in a manner that prevents the movement of fluid potentially containing any contaminant into an underground source of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 141 or Utah Primary Drinking Water Standards R309-200-5, or may otherwise adversely affect the health of persons or the environment.

General procedures for well closure are described below and may be modified prior to performing field operations according to the direction of the UDEQ and/or EPA:

B. Cessation of Injection Activities

After a cessation of injection of two (2) years, GOSP shall plug and abandon the well in accordance with the Plugging and Abandonment Plan, notice is provided to UDEQ that the well will be used in the future and has described actions or procedures, satisfactory to UDEQ, that will be taken to ensure that the well will not endanger USDWs during the period of temporary abandonment.

C. Notice of Intent to Plug

GOSP will notify UDEQ at least 30 days before further conversion, workover, or abandonment of the well. GOSP understands that UDEQ may require that the plugging and abandonment be witnessed by an EPA representative.

D. Detailed Information to be provided with the Formal Notice of Intent to Plug:

1. Type plug to be set.
2. Placement the plug including the approximate elevation of both the top and bottom of the plug.
3. Type, grade, and quantity of the plugging material and additives to be used.
4. Method used to place the plug.
5. Procedure used to plug and abandon the well.
6. Any information on newly constructed or discovered wells, or additional well data, within the Area of Review.
7. Procedures that will be used to determine whether any soil, gravel, sludge, liquids, or other materials will need to be managed or removed from or adjacent to the well in accordance with all applicable Federal, State, and local regulations and requirements.

E. Plugging and Abandonment Report

Within sixty (60) days after plugging the well, GOSP will submit a Plugging and Abandonment Report to UDEQ. The report shall be certified as accurate by the person who performed the plugging operation and the report shall consist of either: (1) a statement that the well was plugged in accordance with the plan, or (2) where actual plugging differed from the plan, a statement specifying the different procedures followed.

Part M - Financial Responsibility

(R317-7-9.1(D)(24); R317-7-9.4; 40CFR144.52(a)(7))

Federal governments are exempt from the financial responsibility requirements.

ATTACHMENT D

PLAN FOR PLUGGING AND ABANDONMENT OF CLASS V WELLS

No monitoring equipment is used to collect the samples. As such, maintenance of monitoring equipment is not needed.

Recordkeeping

Maintenance, sampling and monitoring records and information (e.g., maintenance log books, disposal records, and analytical data from monitoring events) are maintained at the Engine House at Golden Spike NHS. Records will be maintained on-site until at least the next permit review.

Reporting

A written letter report will be provided to UDEQ at least annually. The letter report will summarize the results of the compliance monitoring performed. Such summary shall include monthly records of injected fluids, and any major changes in characteristics or sources of injected fluid. Previously submitted information may be included by reference.

Part K – Contingency Plan

(R317-7-9.1(D)(19))

If permit limits are exceeded, operations and/or maintenance activities at the site would be suspended until appropriate corrective action is taken in coordination with UDEQ.

Part L – Plugging and Abandonment Plan

(R317-7-6.6; R317-7-9.1(D)(23); 40CFR144.52(a)(6); 40CFR146.10)

Submit a plugging and abandonment plan that meets the requirements of R317-7-6.6 and is acceptable to the Director.

A. General Well Closure Procedures

Prior to abandoning the maintenance waste collection system, GOSP shall close the oil inceptor well in a manner that prevents the movement of fluid potentially containing any contaminant into an underground source of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR Part 141 or Utah Primary Drinking Water Standards R309-200-5, or may otherwise adversely affect the health of persons or the environment.

General procedures for well closure are described below and may be modified prior to performing field operations according to the direction of the UDEQ and/or EPA:

B. Cessation of Injection Activities

After a cessation of injection of two (2) years, GOSP shall plug and abandon the well in accordance with the Plugging and Abandonment Plan, notice is provided to UDEQ that the well will be used in the future and has described actions or procedures, satisfactory to UDEQ, that will be taken to ensure that the well will not endanger USDWs during the period of temporary abandonment.

C. Notice of Intent to Plug

GOSP will notify UDEQ at least 30 days before further conversion, workover, or abandonment of the well. GOSP understands that UDEQ may require that the plugging and abandonment be witnessed by an EPA representative.

D. Detailed Information to be provided with the Formal Notice of Intent to Plug:

1. Type plug to be set.
2. Placement the plug including the approximate elevation of both the top and bottom of the plug.
3. Type, grade, and quantity of the plugging material and additives to be used.
4. Method used to place the plug.
5. Procedure used to plug and abandon the well.
6. Any information on newly constructed or discovered wells, or additional well data, within the Area of Review.
7. Procedures that will be used to determine whether any soil, gravel, sludge, liquids, or other materials will need to be managed or removed from or adjacent to the well in accordance with all applicable Federal, State, and local regulations and requirements.

E. Plugging and Abandonment Report

Within sixty (60) days after plugging the well, GOSP will submit a Plugging and Abandonment Report to UDEQ. The report shall be certified as accurate by the person who performed the plugging operation and the report shall consist of either: (1) a statement that the well was plugged in accordance with the plan, or (2) where actual plugging differed from the plan, a statement specifying the different procedures followed.

ATTACHMENT E

MONITORING PARAMETERS AND SCHEDULE

GOLDEN SPIKE MONITORING PARAMETERS AND MONITORING SCHEDULE

ANALYTE	CAS Number	UNITS	MCL (mg/L)	Secondary Drinking Water Regulations (mg/L)	Semi-Anually	Quarterly if there is an exceedence
Inorganics:						
Arsenic	7440-38-2	mg/L	0.01		X	X
Barium	7440-39-3	mg/L	2		X	X
Cadmium	7440-43-9	mg/L	0.005		X	X
Chromium (Total)	7440-47-3	mg/L	0.1		X	X
Lead	7439-92-1	mg/L	0.015		X	X
Mercury (inorganic)	7487-94-7	mg/L	0.002		X	X
Selenium	7782-49-2	mg/L	0.05		X	X
Silver	7440-22-4	mg/L		0.1	X	X
Nitrate/Nitrite:						
Nitrate (as Nitrogen)	14797-55-8	mg/L	10		X	X
Nitrite (as Nitrogen)	14797-65-0	mg/L	1		X	X
Total Nitrate and Nitrite (as N)		mg/L	10		X	X

ANALYTE	CAS Number	UNITS	MCL (mg/L)	Secondary Drinking Water Regulations (mg/L)	Semi-Anually	Quarterly if there is an exceedence
Volatile Organic Contaminants (VOC):		Method 524.2 VOC				
Benzene	71-43-2	mg/L	0.005		X	X
Carbon tetrachloride	56-23-5	mg/L	0.005		X	X
Dichlorobenzene o-	95-50-1	mg/L	0.6		X	X
Dichlorobenzene p-	106-46-7	mg/L	0.075		X	X
Dichloroethane (1,2-)	107-06-2	mg/L	0.005		X	X
Dichloroethylene (1,1-)	75-35-4	mg/L	0.007		X	X
Dichloroethylene (cis-1,2-)	156-59-2	mg/L	0.07		X	X
Dichloroethylene (trans-1,2-)	156-60-5	mg/L	0.1		X	X
Dichloromethane	75-09-2	mg/L	0.005		X	X
Dichloropropane (1,2-)	78-87-5	mg/L	0.005		X	X
Ethylbenzene	100-41-4	mg/L	0.7		X	X
Monochlorobenzene	108-90-7	mg/L	0.1		X	X
Styrene	100-42-5	mg/L	0.1		X	X
Tetrachloroethylene	127-18-4	mg/L	0.005		X	X
Toluene	108-88-3	mg/L	1		X	X
Trichlorobenzene (1,2,4-)	120-82-1	mg/L	0.07		X	X
Trichloroethane (1,1,1-)	71-55-6	mg/L	0.2		X	X
Trichloroethane (1,1,2-)	79-00-5	mg/L	0.005		X	X
Trichloroethylene	79-01-6	mg/L	0.005		X	X
Vinyl chloride	75-01-4	mg/L	0.002		X	X
Xylenes	1330-20-7	mg/L	10		X	X

ANALYTE	CAS Number	UNITS	MCL (mg/L)	Secondary Drinking Water Regulations (mg/L)	Semi-Anually	Quarterly if there is an exceedence
Pesticides:	**Method 525.2 SVOC Pesticides and Semi-Volatile Organic Compounds**					
2,4 - D (2,4 - dichlorophenoxyacetic acid)	94-75-7	mg/L	0.07		X	X
2,4,5-TP (Silvex)	93-72-1	mg/L	0.05		X	X
Alachlor	15972-60-8	mg/L	0.002		X	X
Aldicarb	116-06-3	mg/L	0.003		X	X
Aldicarb sulfone	1646-88-4	mg/L	0.003		X	X
Aldicarb sulfoxide	1646-87-3	mg/L	0.004		X	X
Atrazine	1912-24-9	mg/L	0.003		X	X
Benzo(a)pyrene (PAH)	50-32-8	mg/L	0.0002		X	X
Carbofuran	1563-66-2	mg/L	0.04		X	X
Chlordane	57-74-9	mg/L	0.002		X	X
Dalapon (sodium salt)	75-99-0	mg/L	0.2		X	X
Di(2-ethylhexyl) adipate	103-23-1	mg/L	0.4		X	X
Di(2-ethylhexyl) phthalate	117-81-7	mg/L	0.006		X	X
Dinoseb	88-85-7	mg/L	0.007		X	X
Endrin	72-20-8	mg/L	0.002		X	X
Heptachlor	76-44-8	mg/L	0.0004		X	X
Heptachlor epoxide	1024-57-3	mg/L	0.0002		X	X
Hexachlorobenzene	118-74-1	mg/L	0.001		X	X
Hexachlorocyclopentadiene	77-47-4	mg/L	0.05		X	X
Lindane	58-89-9	mg/L	0.0002		X	X
Methoxychlor	72-43-5	mg/L	0.04		X	X
Oxamyl (Vydate)	23135-22-0	mg/L	0.2		X	X
Pentachlorophenol	87-86-5	mg/L	0.001		X	X
Picloram	1918-02-1	mg/L	0.5		X	X
Polychlorinated biphenyls (PCBs)	1336-36-3	mg/L	0.0005		X	X
Simazine	122-34-9	mg/L	0.004		X	X
Toxaphene	8001-35-2	mg/L	0.003		X	X

ATTACHMENT F

REPORTING TABLES

Table of Reporting and Notification Requirements

Utah UIC Permit Number: UTU-03-IP-8F54B7F; Golden Spike National Historic Site

Triggering Event	Time Frame	Permittee Response	Utah DWQ Approval
Operator Change of Address	at least 15 days prior to the effective date of the event	Submit written notice to the Executive Secretary	Not Applicable
Claims of Confidential Business Information	at the time of submittal	Stamp the words "Confidential Business Information" on each page of submittal	Written Approval
Permit Expiration	180 prior to permit expiration date	Submit permit renewal application	Written Approval
Planned physical alterations or additions to the UIC permitted facilities	at least 30 days prior to implementing the event	Submit written notice to the Executive Secretary	Written Approval
Any spill, leak or noncompliance of a permit condition that may endanger human health or the environment.	within 24 hours from the time the permittee becomes aware of the event	Orally report to Executive Secretary or representative at **801-538-6146 (during normal business hours) or at 801-536-4123 (for reporting at all other times).**	Not Applicable
	within 5 days of the time the permittee becomes aware of the event	Submit written report including description of the spill, leak or noncompliance and its cause, exact dates and times, steps taken to mitigate the effects, and steps taken or planned to prevent a re-occurrence. If a leak or noncompliance is ongoing, the submission shall indicate the anticipated time it is expected to continue.	
Receipt of this permit	within 30 days of receipt of this permit	Report to the Executive Secretary that the person(s) designated to implement the requirements of this permit has read and is personally familiar with all terms and conditions of this permit	Not Required
Permittee becomes aware that he failed to submit any relevant facts in the permit application or submitted incorrect information in a permit application or in any report to the Executive Secretary.	within 10 days of becoming aware of the event	Submit such facts or information within 10 days of the time they become known.	
Change in source of injectate or process fluids	within 10 days prior to implementing the event	Submit written description of the proposed change	Written Approval

Table of Reporting and Notification Requirements

Utah UIC Permit Number: UTU-03-IP-8F54B7F; Golden Spike National Historic Site

Triggering Event	Time Frame	Permittee Response	Utah DWQ Approval
Notification of a spill or dumping incident which may adversely affect the quality of the injectate or any finding by the permittee or the Executive Secretary that the injected fluid exceeds permit limits.	Immediately	Cease injection	Written Approval to recommence injection
Plugging and Abandonment of Injection Well	within 45 days of implementing the event	Submit written notice to the Executive Secretary	Approval of Final Plugging & Abandonment Plan
Completion of Plugging and Abandonment of Injection Well	within 60 days after the event	Submit a copy of the plugging and abandonment report to the Executive Secretary	
Cessation of injection activities	after 2 years of inactivity	Plug and abandon the injection well unless a variance has been obtained prior to the end of the 2 year period	

ATTACHMENT G

UIC BMP PLAN

June 2014

Pollution Prevention Plan & Best Management Practices for Underground Injection Control Permit

Prepared for:

National Park Service
Golden Spike National Historic Site
Brigham City, Utah

DWQ-2014-018759

Prepared by

Michael Baker Jr., Inc.
Moon Township, PA

POLLUTION PREVENTION PLAN & BEST MANAGEMENT PRACTICES
UNDERGROUND INJECTION CONTROL PERMIT
GOLDEN SPIKE HISTORIC SITE
BRIGHAM CITY, UTAH

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POLLUTION PREVENTION PLAN & BEST MANAGEMENT PRACTICES
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GOLDEN SPIKE HISTORIC SITE
BRIGHAM CITY, UTAH

1.0 INTRODUCTION

1.1 Purpose

Discharges of fluids to the ground have been increasingly identified as a significant source of water pollution in numerous nationwide studies on water quality. To address this problem, the Underground Injection Control (UIC) program was created by Congress to protect underground sources of drinking water from discharges of fluids to the ground.

As mandated by the Safe Drinking Water Act (SDWA), the United States Environmental Protection Agency (USEPA) has promulgated regulations establishing minimum requirements, technical criteria and standards for UIC programs to protect underground sources of drinking water (USDW) from endangerment by subsurface emplacement of fluids (40 CFR Parts 144-148) into UIC Wells. The Utah Bureau of Water Pollution Control (BWPC), now the Utah Division of Water Quality, received primacy from USEPA on February 10, 1983 to administer the program in Utah under section 1422 of the Safe Drinking Water Act for Class I, III, IV and V wells (the Utah 1422 UIC Program).

Facilities regulated under the Utah 1422 UIC Program are permitted by rule under the Utah Ground Water Quality Protection Program. No facility permitted by rule, including facilities regulated under the UIC Program, may cause ground water quality to exceed the ground water quality standards in Table 1 of R317-6.

The UIC program protects underground sources of drinking water by reviewing and approving numerous small scale injection activities such as storm water dry wells, ground water remediation wells, and domestic underground drain fields.

Associated with the program is the need to implement best management practices (BMPs) to protect underground sources of drinking water. BMPs are inherently pollution prevention practices. Traditionally BMPs have focused on good housekeeping measures and good management techniques intending to avoid contact between pollutants and water media as a result of leaks, spills, and improper waste disposal. BMPs include structural and operational (non-structural) practices. Non-structural practices can also be referred to as source controls.

1.2 Objectives

The objective is to prepare a BMP Plan to accompany the UIC Permit for operation of the inceptor. These BMPs will focus on pollution control regarding the oil inceptor at the facility. These objectives are to be attained by implementing structural, non-structural, and management controls in accordance with good engineering practices. The format for this BMP complies with the requirements set forth in the UIC Permit No. UTU-03-IP-8F54B7F.

The development of a successful BMP Plan includes:

- Pollution Control
- Operations and Maintenance BMPs
- Employee Education and Training
- Policy and Regulation

1.3 References

The following documents are relevant to the development of this BMP:

- UIC Permit No. UTU-03-IP-8F54B7F, effective July 26, 2011
- *Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices*, USEPA 832-R-92-006, September 1992.
- *Washington State Department of Ecology Guidance for UIC Wells that Manage Stormwater*, 05-10-067, December 2006.

2.0 FACILITY INFORMATION

2.1 Site Location

The Golden Spike National Historic Site (GOSP) consists of 2,700 acres located in Promontory, Utah. It is approximately 15 miles east of the Great Salt Lake. GOSP lies within a valley at an elevation of 4,918 feet above mean sea level. A site location map is provided as **Figure 2-1**.

2.2 Site Description

GOSP is a National Park Service (NPS) facility commemorating the completion of the Transcontinental Railroad at Promontory, Utah. The park operates two (2) steam-powered locomotives on a daily basis as part of the historic reenactment of the completion of construction of the transcontinental railroad and the driving of the golden spike where the Central Pacific and Union Pacific rail lines met in northern Utah. The most active time for the park is during the summer months from May 1 through Columbus Day. A site location plan is provided as **Figure 2-2**.

2.3 Site Activities

The GOSP operations over the 2,700 acres of property consist of an Engine House, leach field, fuel storage area, visitor center/information center and ranger station.

The Engine House maintains the two (2) steam-powered locomotives. Its activities include cleaning, oiling, servicing and mechanical maintenance of the locomotives. It is equipped with a floor drain system to capture the wash water and associated runoff generated during maintenance activities. Typically, 1,000 gallons of waste are generated during the active summer months. The collection system is routed through an oil/water inceptor (or separator) where the oil and associated content are separated from the water. The oil inceptor is approximately a 2,400 gallon tank with a concrete partition to hold the oil. The oily residue chamber is cleaned twice annually. A contractor will dispose of the oily water and pumps the interceptor. Typically 2,500 gallons are pumped while adding water to the inceptor to aid in the cleaning process. The water separated from the oil is then gravity drained to an adjacent leach field. The Engine House is the main generator of fluid for the oil inceptor.

The oil inceptor, shown in **Figure 2-3**, is designed to allow sediments to settle out prior to entering the leach field. Material such as oil floating on the top of the trapped water is retained and can be removed when the separator is cleaned. If not properly designed and frequently cleaned, separators may also allow trapped sediment to be resuspended and pass out of the separator during subsequent flow events.

The leach field collects the drain off water from the Engine House. The field is 432 square feet and is approximately 800 feet higher in elevation than the Great Salt Lake. It's also eight (8) feet underground (14 feet to the bottom). There are currently no controls or secondary containment surrounding the leach field.

A drinking water well is located 1/3 mile upgradient from the oil inceptor/leach field system. The well depth is 423 feet deep with the pump set at 413 feet. The well was established in 1967 and has been in continual use since then.

Located approximately a quarter mile away from the Engine House is the fuel storage area. The fuel storage area consists of a 500-gallon diesel fuel tank and a 500-gallon gasoline fuel tank. Each tank is triple wall therefore no controls or secondary containment are required.

The site also includes four (4) pieces of mobile equipment and two (2) emergency generators along with a visitor/information center and ranger station.

The surrounding land is relatively flat which is laid out in gravel and dirt surfaces.

3.0 POLLUTION CONTROL

The SDWA is the main federal law that ensures the quality of Americans' drinking water. Federal and state regulators now require facilities to take steps to protect underground sources of drinking water. Contamination in the drinking water well can be prevented with common sense precautions and modest changes in routine operations or maintenance practices.

As described in Section 2, GOSP is a National Park Service which operates two steam-powered locomotives as part of a historic reenactment of the completion of construction of the transcontinental railroad. The following sections describe potential exposed materials to the drinking water well as well as the spill and leak history at the site.

The facility needs to identify and implement BMPs to assist with pollution control from the potential exposures, specifically the oil inceptor. These BMPs are described in greater detail in Section 4.

3.1 Inventory of Potential Exposed Materials

This is an inventory of potential pollutants and sources that are found on-site that may be contaminant sources. The following activities are potential sources of pollutants that may reasonably be expected to be measurable amounts of pollutants to drinking water contamination.

- Oil Inceptor – housed in the Engine House, contains approximately 2,400 gallons. Handles the maintenance wastes generated from activities performed on the locomotives.

- Maintenance Wastes – include industrial gear oil, steam cylinder valve oil, locomotive bearing oil, synthetic air compressor oil, grease and laundry detergent.

- Diesel Fuel Tank – a triple wall tank approximately a quarter mile away from the Engine House.

- Gasoline Fuel Tank – a triple wall tank approximately a quarter mile away from the Engine House.

- Solvents – used and stored at the Engine House for stripping brass and painting. This waste is drummed up and sent off-site for proper disposal.

- Mobile Equipment – four (4) units stored approximately a quarter mile away from the Engine House, may contain oils, greases, fuels and batteries.

Emergency Generators – two (2) units stored approximately a quarter mile away from the Engine House, may contain oils, greases and fuels.

3.2 Spill and Leak History

A reportable spill is defined as a release, within a 24-hour period, of hazardous substance in excess of the reportable quantities, as defined by Section 311 of the Clean Water Act and Section 102 of CERCLA.

There have been no reportable quantity spills at the GOSP. GOSP completes the oiling and servicing in the Engine House over the maintenance pits. The oil which drains into the pits from servicing is captured in the oil inceptor.

4.0 OPERATIONS AND MAINTENANCE

Proper operational BMPs are often effective and inexpensive ways of preventing contamination. In accordance with the requirements of the Utah Water Quality Board Class V General Permit Underground Injection Control Program (UTU-03-IP-8F54B7F), pollution prevention measures for the facility have been implemented. The pollution prevention measures shall address the following BMPs:

- Good Housekeeping Measures
- Preventative Maintenance
- Visual Inspections
- Spill Prevention and Response
- Sediment and Erosion Control
- Management of Runoff

Each of the BMPs is discussed in greater detail below. These BMPs have been incorporated into normal operating practices conducted at GOSP.

4.1 Good Housekeeping

GOSP maintains standards for housekeeping throughout the facility to reduce the potential for accidental spills and to insure that safety hazards are kept to a minimum. These practices generally include:

- Keeping storage and work areas clean and uncluttered;
- Storing materials mostly indoors;
- Maintaining clear work aisles;
- Prompt cleaning/removal of spill material;
- Keep residual waste bin and recyclables bin lid closed when not placing material in them;
- Ensure proper security measures are in place;
- Remove litter and trash and properly dispose in solid waste containers/dumpsters
- Maintaining clean, dry floors and work areas, with regular sweeping

Good housekeeping is necessary to maintain a neat and clean work place that promotes both worker safety and a cleaner environment. Housekeeping is practiced daily; management performs periodic housekeeping inspections and maintains records for their respective areas.

Housekeeping is part of daily operations. Good housekeeping includes continuously improving operations and maintenance of processes and equipment, proper storage of materials and wastes, maintaining routine cleanup schedules, maintaining well organized work areas, and promoting safe work habits of personnel.

4.2 Preventative Maintenance

The preventive maintenance program will include regular inspections and maintenance of the oil inceptor. All controls will be kept in proper operating condition.

GOSP will regularly inspect and test equipment and operational systems whose failure has a potential to release pollutants into the oil inceptor. Inspections uncover conditions such as cracks or slow leaks that could cause breakdowns or failures that result in discharges of chemicals or particular matter (solids) to the oil inceptor/leach field system. The program will reduce breakdowns and failures by making proper adjustments, repair, or replacement of equipment or parts.

Standard operating procedures include two (2) specific preventive maintenance periods:

- Oil/water inceptor will be cleaned at the beginning of the busy season (early July) and again when the locomotives shut down (late October)
- Preventative maintenance at regularly scheduled intervals that involve inspections, cleaning and minor repairs.

The following items are subject to periodic inspections as they have a direct risk to possible drinking water contamination:

- Injection of the fluids;
- Oil/Water Inceptor – these devices are inspected annually and maintenance is performed as-needed. The oil/water inceptor connected to the drainage system is monitored regularly and checked annually to ensure it is clean and in working order.

4.3 Visual Inspections

4.3.1 Routine Facilities Inspections

GOSP production and material storage areas are patrolled daily by operations, maintenance, and/or supervisory personnel, with identified housekeeping and preventive maintenance needs handled internally. Noted housekeeping and preventive maintenance needs are identified and prioritized.

Inspection items include, but are not limited to:

- Oil inceptor – pumped out semi-annually, at the same time water samples are collected from the distribution box. Since the summer months are when the most maintenance wash is generated, the inceptor will be cleaned at the beginning of the busy season (early July) and again when the locomotives shut down (late October);
- Locomotive fueling area;
- Non-hazardous and hazardous waste storage area;
- Outdoor residual waste storage containers

4.3.2 Visual Assessment

Visual observations are conducted daily during operations and monthly when the system is not being operated. Visual observations, at a minimum, include: an observation of the nature of fluids, injected and an observation of the cumulative volume of fluids injected. Additionally, the floor drain is visually inspected to ensure free drainage and the surrounding concrete surfaces are visually inspected for cracks monthly.

4.4 Spill Prevention and Response

GOSP employees are trained in proper spill prevention; all personnel are aware of the importance of timely response to a spill upon discovery. There are currently no spill clean-up procedures in place because the oiling and servicing is handled over the maintenance pits in the Engine House for the oil to drain directly into the pit then to the oil inceptor.

Any solvent spills are cleaned up and materials associated with the spill are collected in containers for appropriate disposal. Spills on hard surfaces are absorbed or otherwise collected and disposed. Spills to soils are cleaned up by removal of impacted soil.

4.5 Sediment and Erosion Control

The terrain throughout the GOSP facility is relatively level. Therefore, soil erosion and sediment control is not a significant issue.

4.6 Management of Runoff

Considering the extremely low potential of pollutants associated with railroad activity, additional runoff management practices or diversions are not warranted, reasonable or appropriate.

5.0 EMPLOYEE EDUCATION AND TRAINING

5.1 Education

Educating employees and the public about the importance of pollution control is extremely important. The goal of pollution control education and outreach program is to promote voluntary compliance with regulations designed to protect ground water from pollution and to deter international misuse of drinking water wells that introduces contaminants into the drinking water system

5.2 Training

The implementation of the BMP's often includes annual employee training, education and hands on drills. Trained employees understand not only how to perform specific tasks, but why their assigned tasks are important in preventing drinking water contamination. The training will be conducted by a qualified person who is knowledgeable of pollution control measures.

In addition to a training seminar conducted to inform employees of the importance of implementing and maintaining sound pollution control management practices, employees will receive job-specific training in pollution control. The pollution control training consists of topics outlined below:

- GOSP commitment to the environment
- Background of USEPA storm water regulations and requirements
- UIC Permit requirements
- Facility BMPs
- Good Housekeeping
- Preventive Maintenance
- Spill Prevention and Response
- Summary of potential pollution sources

Personnel training is essential to effective implementation of the BMP's. Personnel at all levels of responsibility will be trained in the components and goals of the UIC program and the BMP's. Training will address each component; including how and why tasks are to be implemented. At a minimum, the following components will be part of the training program:

- Personnel will be trained in proper good housekeeping practices;
- Personnel will be trained to recognize toxic and hazardous substances located at the facility;
- Personnel responsible for performing locomotive maintenance also will be trained in
    - Used oil and spent solvent management
    - Fueling procedures

Personnel refresher training will be conducted during annual environmental awareness training or at least on an annual basis. New personnel receive training as soon as practical. Personnel training will be documented.

6.0 POLICY AND REGULATION

The policy set forth in the UIC Permit No. UTU-03-IP-8F54B7F, effective July 26, 2011 states that monitoring and records need to be maintained. Maintaining good records is important in order to track pollution prevention efforts and other benefits of using BMPs.

6.1 Record Keeping and Reporting

Maintenance, sampling and monitoring records and information (i.e., maintenance log books, disposal records, and analytical data from monitoring events) are maintained at the Engine House. Records will be maintained on-site until at least the next permit review.

A written letter will be provided to UDEQ at least annually. The letter report will summarize the results of the compliance monitoring performed. The summary will include monthly records of injected fluids and any major changes in characteristics or sources of injected fluid. Previously submitted information may be included by reference.

The facility manager maintains records of events that occur as a means of tracking the progress of pollution prevention efforts and to develop improved BMPs. Records include documentation of leaks and related incidents. Record keeping also includes maintaining BMP training records, facility inspection documentation, and internal and external BMP related correspondence.

GOSP will maintain a copy of this BMP on-site at all times. Additional documentation regarding environmental releases and subsequent corrective actions, oil/water inceptor maintenance and monthly inspection records for a period of at least three (3) years.

6.2 Evaluation/Monitoring

After the BMP plan has been implemented, it's important to evaluate its success. This includes an annual site inspection, review drills and BMP evaluation by the operators of the facility. Areas near the drinking water well need to be inspected for evidence of contamination.

6.2.1 Water Quality Monitoring Requirements

One water sample is collected from the leach field distribution box semi-annually (i.e., twice a year). The water sample is sent to a Utah-certified lab and is tested for compliance with the Utah Groundwater Quality Standards (Table 1 or R 317-6-2.1), specifically the following analytes: VOCs, SVOCs, PCBs and metals.

6.2.2 Demonstration of Mechanical Integrity

This gravity-fed leach field system cannot be pressure tested. However, water samples are collected from the leach field distribution box semi-annually to demonstrate compliance with Utah Groundwater Quality Standards. The purpose of this sampling is to demonstrate that the potential contaminants in fluids entering the leach field system are detected in a timely manner so as to prevent movement of contaminants to the vadose zone or subsequently to potential drinking water sources.

FIGURES

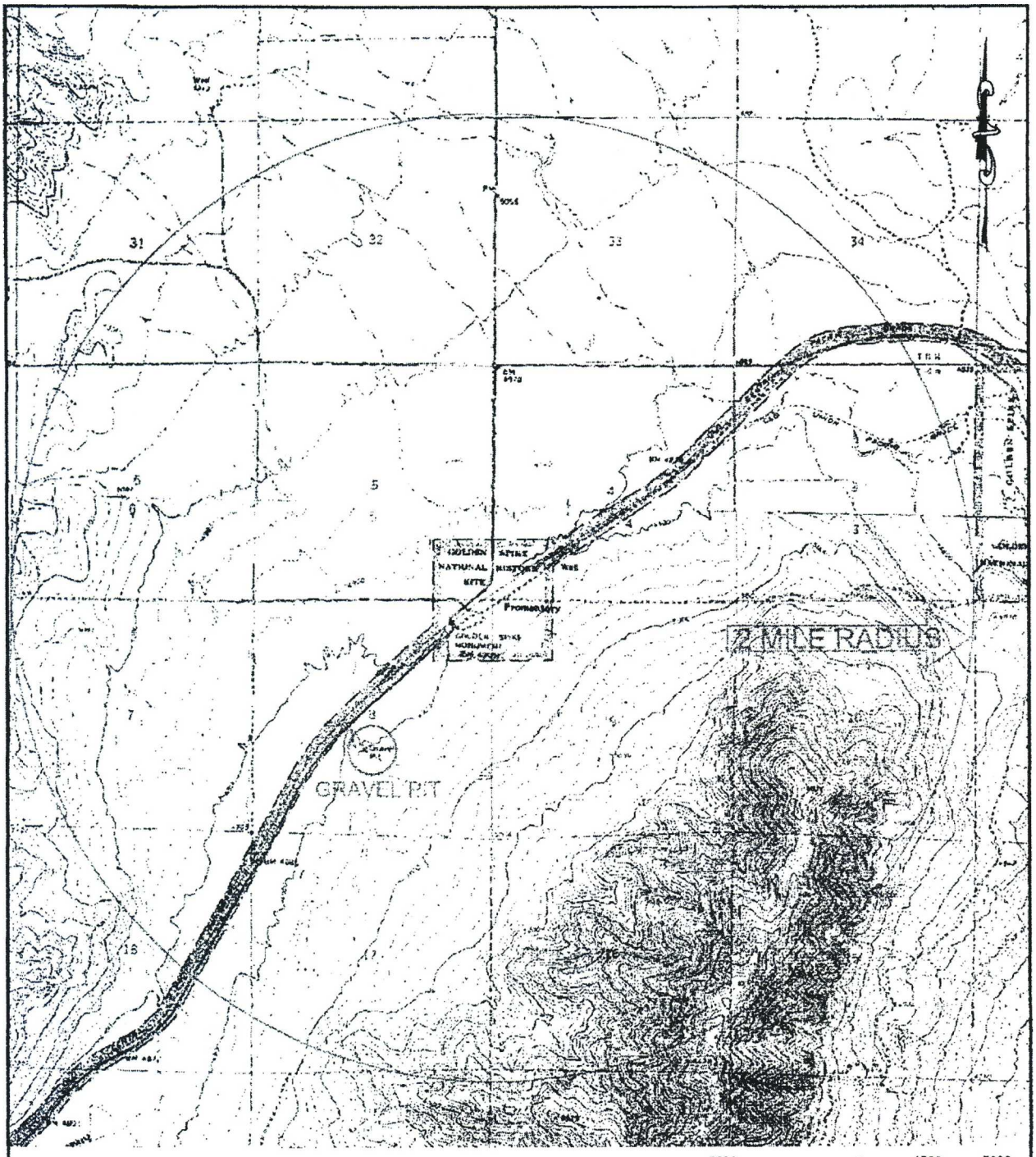
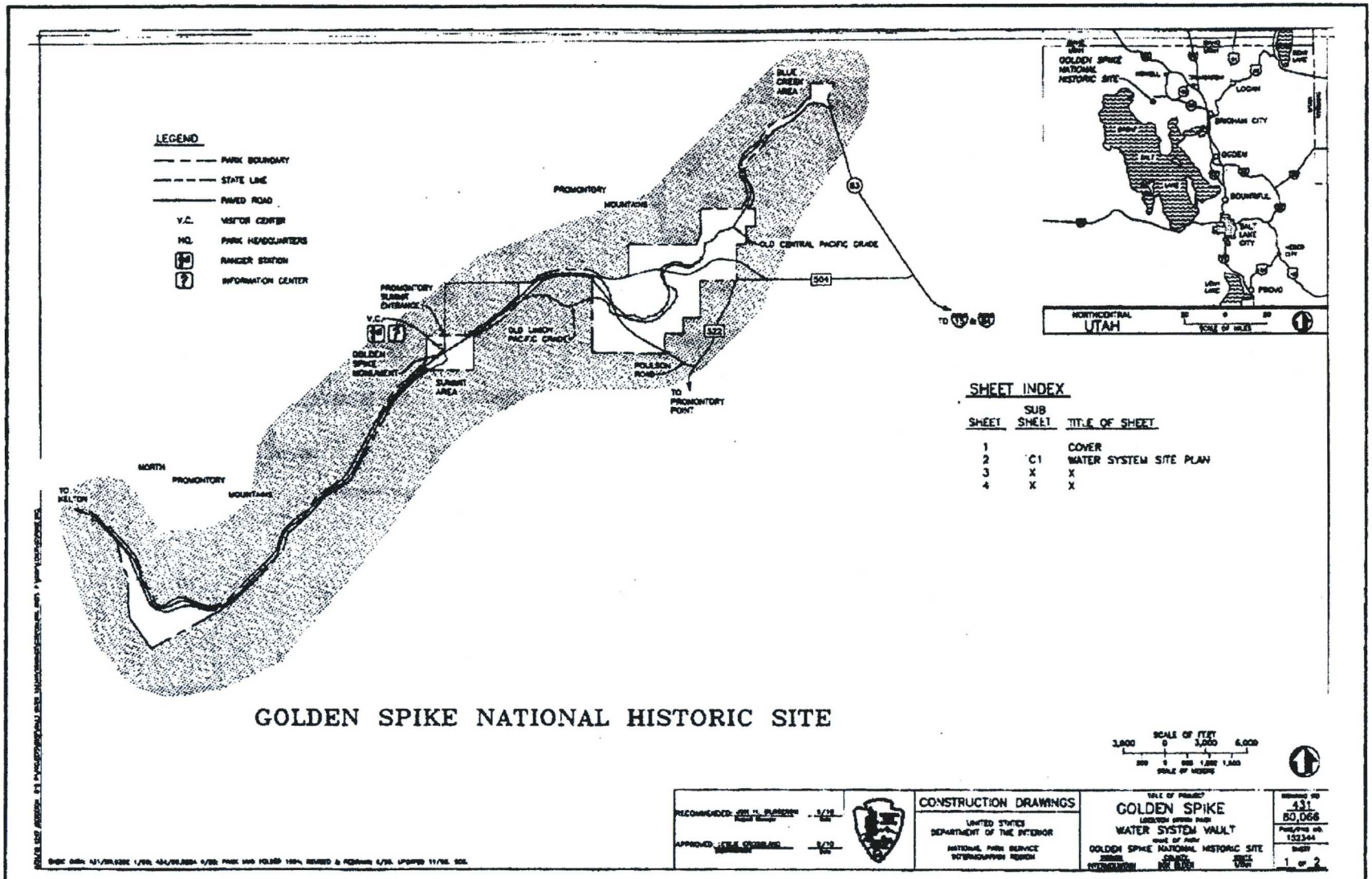


FIGURE 3
AREA OF REVIEW
GOLDEN SPIKE NATIONAL HISTORIC SITE
PROMONTORY, UTAH

SOURCE: U.S.G.S. TOPOGRAPHIC QUADRANGLES.

SCALE:	1" = 3000'	DATE:	NOVEMBER 2010
S.O. NO.:	112314	FILE:	112314F02
DSN/DWN:	EJK/WJH	CHK:	

Michael Baker Jr., Inc.
Moon Township, Pennsylvania

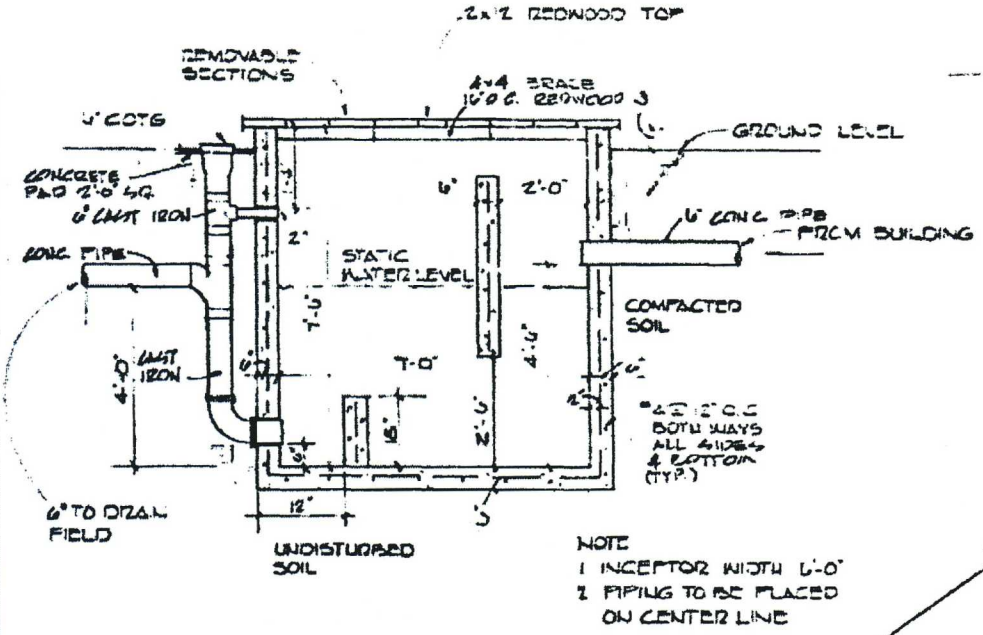


SCALE:	AS SHOWN	DATE:	NOVEMBER 2010
S.O. NO.:	112314	FILE:	112314F10
DSN/DWN:	EJK/WJH	CHK:	

Baker

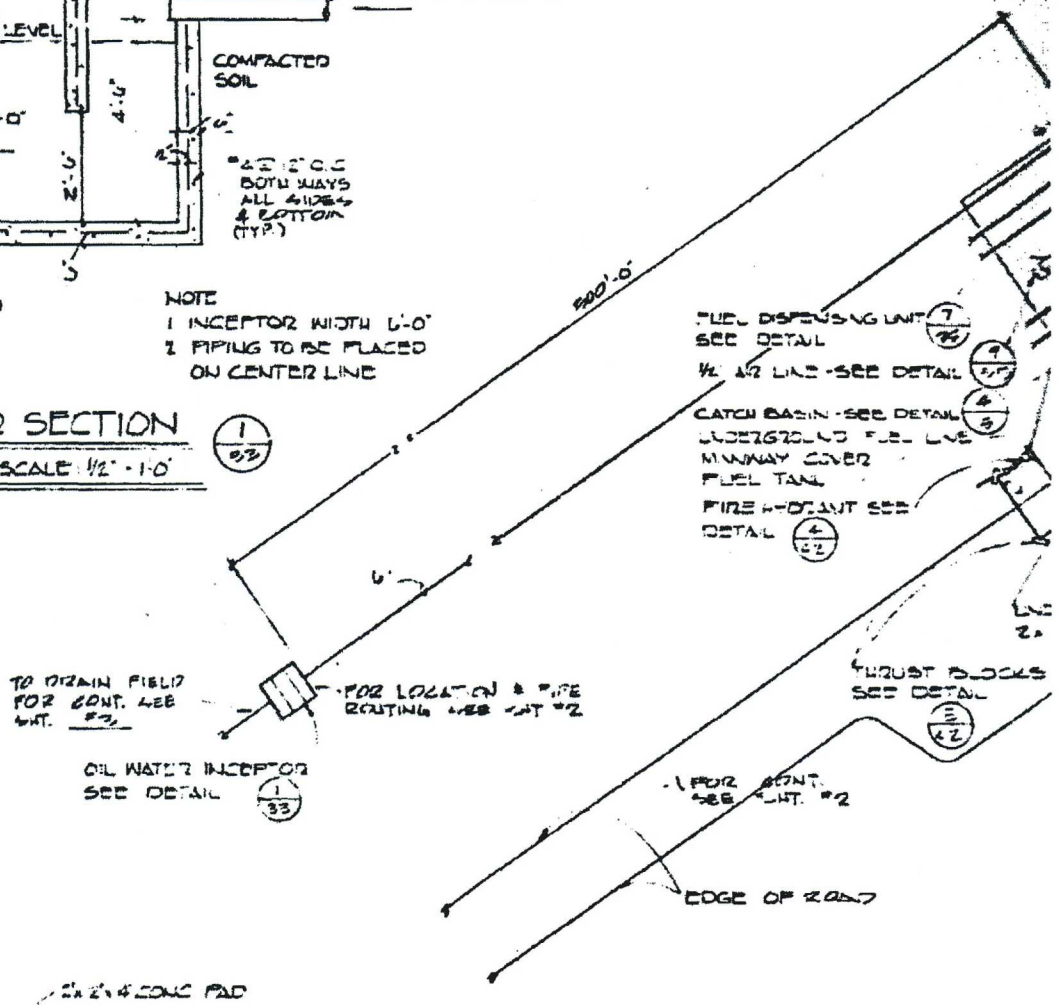
Michael Baker Jr., Inc.
Moon Township, Pennsylvania

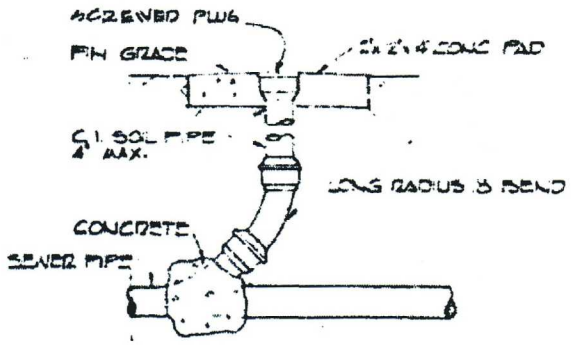
FIGURE 1
FACILITY MAP
GOLDEN SPIKE NATIONAL HISTORIC SITE
PROMONTORY, UTAH



OIL-WATER INCEPTOR SECTION (1/32)

SCALE: 1/2" = 1'-0"





CLEANOUT TO GRADE (2/33)

SCALE: NONE

N

UTILITIES P